PROJECT FILE

FILE NAME CLOSEOUT **JOB NUMBER** 41891.30 **FILE NUMBER** ALL

SITE NAME SPECIAL STUDIES: SIGNETICS CORPORATION SITE, OREM, UTAH

SITE MANAGER TIM JOSEPH

68-41851.80.00004
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FIELD ACTIVITIES REPORT

SIGNETICS CORPORATION

Orem, Utah
UTD009667536

Utah Department of Health
Bureau of Environmental Response & Remediation
Prepared By: Michael J. Storck

Draft 6/26/91

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1.0 Introduction

This report addresses sampling activities conducted June 4, 1991, at Signetics Corporation in Orem, Utah. The first phase of the Screening Site Investigation (SSI) was conducted according to the Sampling Plan submitted to EPA Region VIII on September 20, 1991. Utah Bureau of Environmental Response and Remediation (UBERR) Team Members for this sampling event included:

Michael Storck, Scientist:	Project Manager/Sampler
Jason Knowlton, Scientist:	Safety Officer/Sampler

Jim Cochrane, Environmental Affairs Plant Manager, met the sampling team and made arrangements for access on site. Signetics Corporation contracted EarthFax, a consulting firm that has a local office in Salt Lake City, to take split samples and accompany the sampling team during the sampling investigation. EarthFax also assisted in the purging of the wells prior to sampling.

The sampling objectives of the Site Investigation, as stated in the Sampling Plan, were to:

- Characterize the contaminants on site.
- Determine if groundwater is being contaminated by hazardous materials located on site.
- Obtain the information necessary to score the Signetics site under the revised Hazardous Ranking System (rHRS).

Sample collection entailed only four groundwater samples based on previous site history and the sole source for possible contamination.

2.0 Background

2.1 Site Description

Signetics Corporation, manufacturers of integrated circuits on silicon wafers, is located at 1275 South 800 East, Orem, Utah. The site is located approximately one-half mile north of the Orem City Well. See Figure 1 for location of the site. The site, approximately 28 acres in size, is bounded on the south by University Parkway, to the west by 800 East Street, and on the east by a small frontage road. Signetics Facility lies near the southern edge of the Orem-Provo Bench.

2.2 Site History

Signetics, a subsidiary of U.S. Phillips Corporation, has been in operation since 1980. The company manufacturers integrated circuits on silicon wafers (semi-conductors) using various processes including ion implantation, crystal growth and diffusion

furnace steps, and photolithography. Signetics currently employs about 1200 people.

Included in this facility are a Waste Solvent Storage Tank, a Wastewater Neutralization System and a Chemical Storage area (see Figure 2 for site sketch and building locations). The facility only receives waste products from its own integrated circuits manufacturing operation.

Signetics has installed a 10,000 gallon tank that stores flammable waste solvents. Flammable solvents in the facility are drained to a holding tank located in the plant. Twice daily the solvents are pumped to the 10,000 gallon holding tank that is located outside the main building area, south of the parking lot. A transporter will pump the tank once per month and ship the liquid to United States Pollution Control Incorporated (USPCI) for disposal.

The Chem Stores Group at Signetics is responsible for all incoming and outgoing chemicals. Wastes generated at the Chemical Storage Warehouse comes mainly from container washout. Acid bottle and drum washout drains to the Elementary Neutralization Unit (ENU). Solvent bottle and some drain washout drains to the 10,000 gallon flammable solvents tank. Tetrachloroethane (TCA) is distilled at Chem Stores. Still bottoms from the distiller are drummed and accumulated as hazardous waste.

Signetics has recently finished completion of a new ENU that is above ground. Wastewater sent to the ENU includes all plant wastewater and a variety of inorganic acids and bases.

Signetics currently has two production areas, FAB 19 and FAB 21 (Figure 2), where the majority of the plant's waste is generated. Mr. James Cochrane, Environmental Affairs Plant Manager, estimates 21 waste streams run throughout the plant. Please refer to UBERR's Sampling Plan, Section 3.2, dated September 20, 1990, for a complete list of waste streams currently being used by Signetics.

It appears that the groundwater pathway could pose the greatest hazard. Prior to 1980 it was reported that Signetics personnel sprayed unknown quantities of organic solvents over the soil in the parking lot area (the parking lot area was covered with asphalt in 1985), specifically the northeast section. Signetics contracted Emcon Associates, a consulting firm located in San Jose, California, to do a groundwater study of the facility in May, 1982. Results of the investigation showed groundwater contamination in the uppermost portion of the aquifer below the site. The volatile organic compounds that were found in the groundwater include trichloroethylene, tetrachloroethane, 1,1,1-trichloroethane, benzene, toluene, and ethylbenzene (EPA Methods 624/625 were used).

EarthFax conducted a follow-up groundwater study in October, 1989. Analytical results data from the samples collected indicate that

the uppermost portion of the aquifer had not been contaminated by volatile or semivolatile organic compounds. A small concentration (.0048 mg/l) of bis (2-ethylhexyl) phthalate was detected in SGW-1 (see Figure 3, Monitoring Well Locations). EarthFax concluded that the low concentration of this compound was present because of possible laboratory contamination.

3.0 **Field Activities**

3.1 Well Installation

Figure 3 illustrates that SGW-1 is an upgradient well which is located several hundred feet away from the nearest Signetics facility. Since the spill that occurred prior to 1980 was in the same location as SGW-1 this well could not be considered a true background well. Therefore, Ecology & Environment (E&E), Field Investigation Team (FIT) contractor for EPA, was contracted to drill a new background well, SGW-2.

Well location for SGW-2 is in the northeast parking lot, approximately 300 feet southeast of SGW-1. Boyles Bros., a local drilling firm, was subcontracted by Signetics and did the drilling for this well. Initial installation of the well began on May 8, 1991. The drilling method used by Boyles Bros. was air rotary. Initially, ten foot sections of six-inch diameter outer stainless steel casing was driven to a depth of 110 feet. The water table was reached at a depth of 87.5 feet. The well was completed with two-inch stainless steel inner casing and screened (.020 inch slots) from 100 to 110 feet. During initial development of the well problems were encountered as bentonite and sand seem to cave in at the screening interval and spread laterally. As a result the screen was covered with bentonite and cement and made development of this well impossible. Diane Coker, Project Manager for E&E, consulted with the Project Manager for the State, Michael Storck, and decided to drill a new well near the same location. The well was drilled to a depth of approximately 100 feet. Upon completion of the last ten foot section of outer casing into the borehole a problem occurred with the breakage of hydraulic hosing from the rig and leakage of hydraulic fluid into the outer casing of the well. Since there was a potential for contamination to the background well (from leakage of the hydraulic fluid into the well casing) a decision was made to abandon the hole and start another borehole.

To help control the spreading/pouring out of sand and bentonite the annulus of the well was sand packed to the top of the water table with 20-mesh silica sand. The remainder of the annulus above the sand pack was filled with bentonite grout. It was also noted that, due to "heaving" sands, water (from Orem City well) was tremmied into the annulus and helped to form the sand pack. Before the water was tremmied into the annulus of the well a sample was taken and sent to the Utah State Laboratory for volatile analysis (EPA Method 624). Analytical results from the sample collected

indicated no volatile contamination. Diane Coker monitored the water for chlorides and found that the water contained no chlorides above the detection limits (one part per million). The well was completed to a depth of 110 feet with two-inch stainless steel casing. The well was screened (.020 inch slots) from 90 to 100 feet. The well was developed the next day (May 21, 1991) using a peristaltic pump. All purge water, decontamination fluids, cuttings, and other investigation derived material (IDM) was tested (HNu readings, pH, chloride, etc.). After consulting with EPA (Luke Chavez, Site Assessment Manager for Region VIII), a decision was made to drum all IDM material into 55-gallon drums, and leave the drums on-site. EPA will arrange for the hazcatting (testing) of the drums and disposal of the drums off-site.

In addition to the background well installed by E&E there are three other monitoring wells located on-site. Emcon installed and developed three wells in March, 1982 (Figure 3, Well Locations). The three permanent groundwater monitoring wells range in depth from 110 to 160 feet and steel casing (diameters from four to six inches) was used during initial drilling and installation. The bottom ten feet of each casing was perforated. EarthFax was contracted by Signetics to develop and sample each well, S-GW-2, S-GW-3, and S-GW-4 in October, 1989. Problems were encountered with the development of S-GW-4 as silt had accumulated in the bottom of the existing six inch diameter slotted well. EarthFax returned in July, 1990, and retrofit monitoring well S-GW-4 using a four inch stainless steel casing and completed the well to a depth of 154.4 feet. Please refer to Attachment 1, Drilling Report, for a complete log on borings and wells installed.

Groundwater data collected by EarthFax during their hydrogeological investigation (Table 3, Water Level Data, October 1989) indicates groundwater elevations in site wells define a south-southwest flow direction. EarthFax concluded from the analytical results obtained from their sampling investigation that the uppermost portion of the aquifer had not been contaminated by volatile or semivolatile organic compounds at the locations sampled (EarthFax, Collection of groundwater quality samples, October 9, 1989).

3.2 Sample Collection

The UBERR sampling team collected four groundwater samples (also collected a duplicate, decon and trip blank) at Signetics on June 4, 1991. Only groundwater samples were collected during this investigation. The only potential source for contamination to the groundwater results from a spill of chlorinated solvents that occurred prior to 1980. Almost all of site's surface, including the location where the spill occurred, is covered by asphalt or cement. During the investigation surface or runoff water was not observed on or off-site. Therefore surface water, sediment, and soil samples were not collected.

One set of groundwater samples were sent in sealed coolers to Gulf South Environmental Lab for complete organic analysis. The other set of groundwater samples were shipped to Natural Resources Lab for inorganic analysis (Attachment 3, Traffic Reports and Chain of Custody Numbers). Both of these facilities are EPA Contract Lab Program (CLP) laboratories. The samples were delivered to the specified laboratories within contract holding times, in strict accordance with proper chain of custody procedures. Split samples were requested and collected by EarthFax during the sampling investigation. All sampling locations are shown in Figure 3.

All sampling activities were conducted in Level D protective clothing.

3.2.1 Groundwater

The collection of groundwater samples included the sampling of one upgradient well, SGW-2, and three monitoring wells located downgradient, SGW-1, SGW-3, and SGW-4. The purging of monitoring well SGW-2 (upgradient well) was done with a bladder pump (set at a flow rate of approximately two gallons per minute) and compressed air from an oil-less compressor. Pumping depth for the bladder pump was set at approximately 98 feet. The purged water appeared to be slightly turbid, containing some silt and fine sand. Purging of this well consisted of removing at least three well volumes of water, until field parameters stabilized. The field parameters, temperature, specific conductance, and pH were continuously monitored (measured after each casing volume of water had been removed) while the wells were being purged and just prior to sample collection (see Table 1 for measurements; Photograph 4, Groundwater parameters measured). HNu readings of each well sampled showed measurements of less than one part per millon (ppm). After each well was purged, separate, decontaminated, teflon bailers were used and each monitoring well was sampled (hand bailing method was used for each groundwater sample collected). All sampling equipment was decontaminated prior to field work with an initial rinse with tap water to remove gross contamination; followed by steam cleaning and an alanox detergent wash and tap rinse; followed by a final rinse with distilled water. Due to mechanical problems with the peristaltic pump and filtering apparatus, groundwater samples were not filtered and will be analyzed for total metals only. All inorganic groundwater samples were preserved with nitric acid to a pH of less than two.

After sampling upgradient well SGW-2 the UBERR sampling team proceeded to a location downgradient from this well, SGW-1. This deep well (approximate depth of 120 feet) was purged with a Grund-Fos pump (set at a pumping depth of about 95 feet) and after pumping approximately 120 gallons of water the well was dry. Due to the slow recharge of this well sampling was done after recovery of the well (approximately two hours) and stabilization of water chemistry parameters had occurred. The groundwater samples

collected from this well appeared clear with some slight turbidity.

Monitoring well SGW-4 was purged next with a bladder pump. The flow rate for this pump was extremely slow (less than .25 gallons per minute). Pumping and purging of the well occurred over a period of approximately eight hours. Finally, it was decided to sample this well after approximately one casing of water had been removed. The groundwater sample collected appeared to be very clear.

Groundwater sample SGW-3 was collected last and the well was purged prior to sampling with a Grund-Fos pump set at a pumping depth of approximately 90 feet and a flow rate of three gallons per minute.

Prior to sample collection, the static water level in each well was measured. Groundwater measurements taken by UBERR personnel (Table 2, Water Level Elevations; Figure 4, Water Table Contour Map) indicate that the direction of groundwater flow in the upper portion of the aquifer is generally to the south-southwest. This generally concurs with the water level data obtained by EarthFax during their groundwater investigation in October, 1989 (Table 3, Water Level Elevations, EarthFax).

Refer to Figure 3 for groundwater sample locations and Attachment 2, Photographs #1-5, for methodology and sampling techniques used by UBERR personnel. George Greenwall, a consultant for EarthFax, assisted in the purging of the monitoring wells and in the collection of split samples for the Signetics Corporation.

3.3 Quality Control

The UBERR Sampling Team maintained the integrity of each sample by extensively decontaminating sampling equipment prior to sampling in the field (see Section 3.2.1 for decontamination procedures) as prescribed in the UBERR's Quality Assurance Project Plan (UBERR, QAPP, 1989). All other activities were performed in accordance with the 1989 UBERR QAPP.

Purge water, decontamination fluids and other investigative derived material was tested (HNu readings, ph, etc.) and was determined to be non-hazardous and was disposed on-site.

3.3.1 Sample Containers

Only certified CLP quality sample containers were used in the sampling program. For the size and type of containers that were used in this sampling investigation refer to Appendix B, Sampling Plan Checklist of the Sampling Plan submitted November 9, 1990. Sample containers were obtained from the Sampling Management Office Sample Bottle Repository and I Chem Research.

3.3.2 Background Sample

A background groundwater sample, SGW-2, was obtained from an upgradient well located in the northeast parking lot adjacent to the site. Refer to Figure 3 for a specific location with respect to the background sample that was collected.

3.3.3 Instrument Calibration

The pH, specific conductivity and temperature meter was calibrated according to manufacturer's instruction prior to field activities and the collection of groundwater samples. No problems were encountered while this equipment was being used in the measurement of groundwater parameters. The HNu was calibrated prior to field use and was used during groundwater sampling for the specific measurement of organic vapors.

3.3.4 QA/QC Samples

Groundwater sample SGW-6 was prepared with distilled water as a trip blank and was collected prior to sampling in the field. Groundwater sample SGW-7 was collected as a decon blank from the decontamination and rinsate of SGW-3. Groundwater sample SGW-5 was collected with SGW-1 as a duplicate sample to evaluate field and laboratory precision. Double volume(inorganics) and triple volume (organics) samples were collected from monitoring well, SGW-3, to be used by the laboratory for internal QA/QC control.

3.4 Documentation

After collection, all samples were handled in strict accordance with chain of custody protocol (UBERR, QAPP, 1989). Organic and inorganic samples were shipped to their destinations via AirBorne Express. Attachment 3, includes a list of sample identification numbers, sample tags, traffic reports and chain of custody numbers.

4.0 **Field Observations**

Purging of the monitoring wells was extremely slow due to the depth of the wells and the large diameters of the well casings (up to eight inch in diameter) which necessitated large volumes of water being removed from the wells to get a representative groundwater sample. Most of the groundwater purged from the monitoring wells was fairly clean with some slight turbidity noted, especially in the upgradient monitoring well, SGW-2. Due to the slow pumping rate (less than .25 gallons per minute) exhibited by the bladder pump in purging monitoring well SGW-4, a groundwater sample was collected after the removal of only one casing volume of water from the well. HNu readings of all monitoring wells showed measurements of less than one part per million.

As noted earlier, due to mechanical failure of the peristaltic pump

and filtering appartus, groundwater samples were not filtered. Therefore, inorganic analysis of the groundwater samples entailed total metals only.

No surface water or ponded water was found on site and the sampling investigation did not include the collection of surface water or sediment samples. Since there was no observable staining of soils found on-site and most of the site's surface is covered with asphalt or cement the collection of soil samples was not warranted.

Air sampling was not conducted during this sampling investigation. There has been no documentation to support a release via the air pathway but if the site goes through a Listing Site Inspection (LSI) the air pathway will need to be evaluated.

Groundwater level measurements taken on June 4, 1991, by UBERR personnel generally concur with studies conducted by EarthFax in 1989. Groundwater flow direction in the upper portion of the aquifer is to the south-southwest.

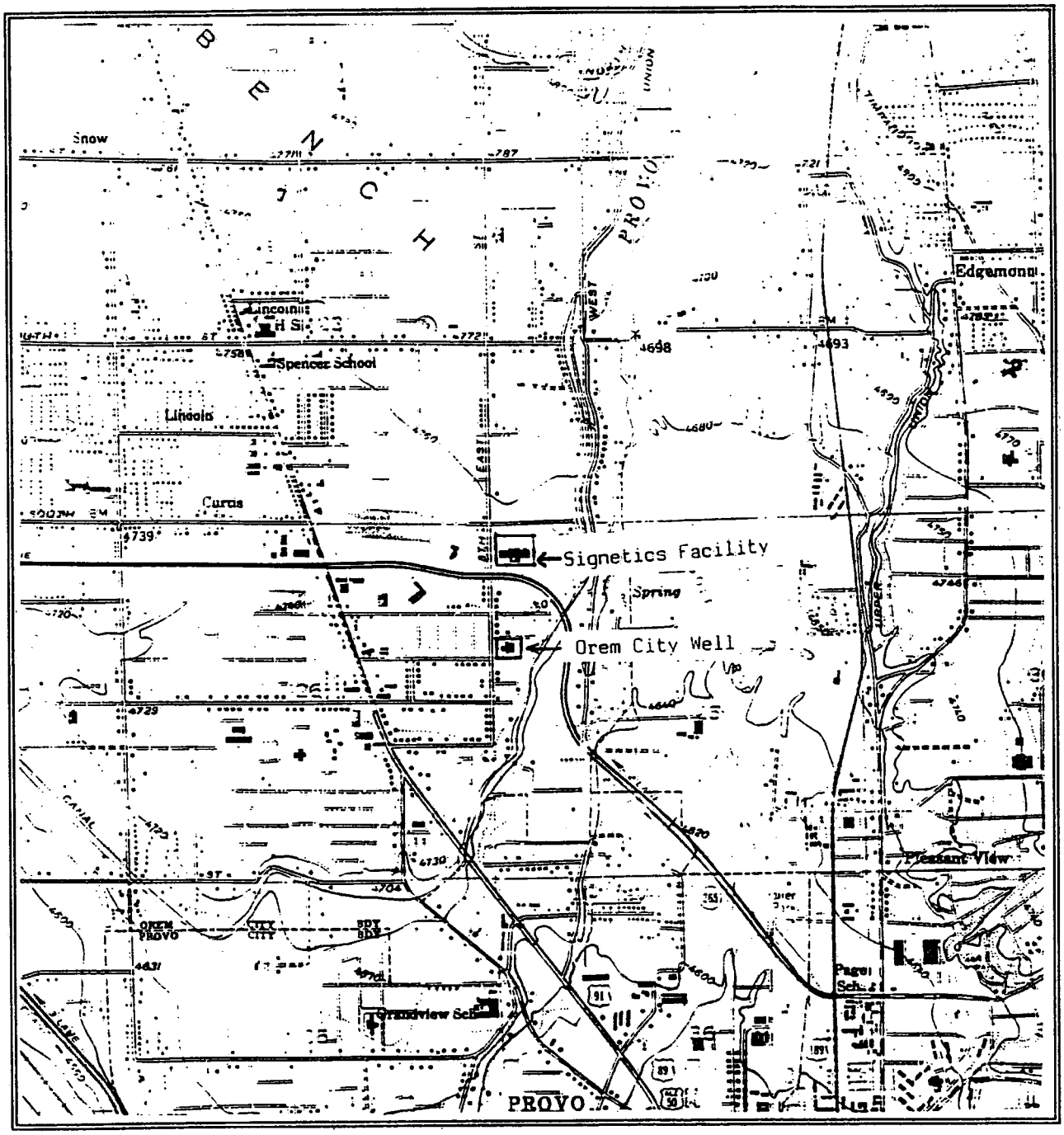
5.0 References

EarthFax, 1989. Collection of Groundwater Quality Samples at Signetics Co., Signetics Site, Orem, Utah.

Emcon Associates, 1982. Hydrogeological and Ground-Water Quality Investigation, Signetics Site, Orem, Utah.

Utah Department of Health, Bureau of Environmental Response & Remediation, 1989. Quality Assurance Project Plan, October.

_____.1990. UBERR Site Inspection Sampling Plan, Signetics, Orem, Utah, September.



NORTH

UTAH DEPARTMENT OF HEALTH

BUREAU OF ENVIRONMENTAL RESPONSE AND REMEDIATION

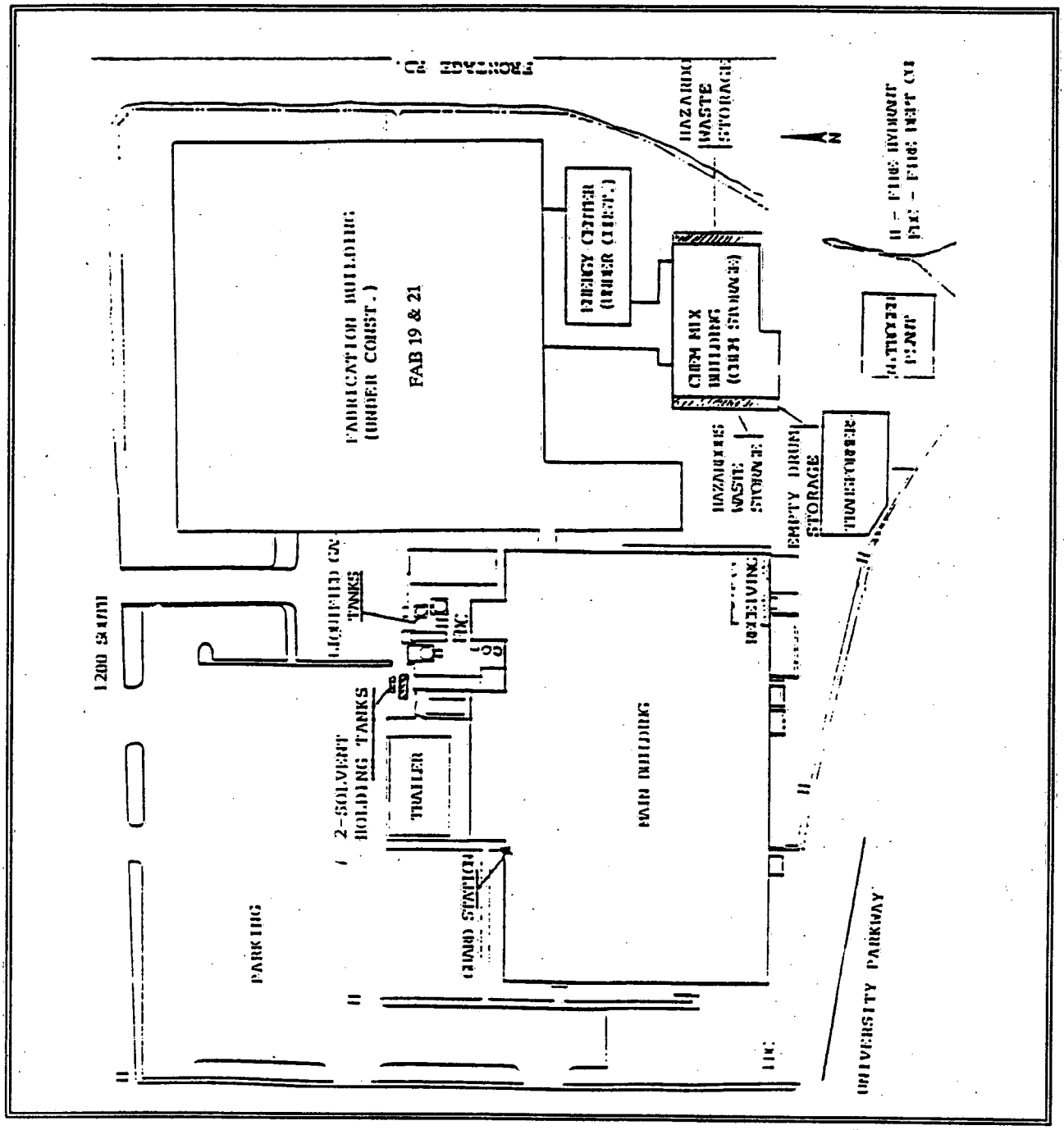
Site Location

Signetics Corporation
Orem, Utah

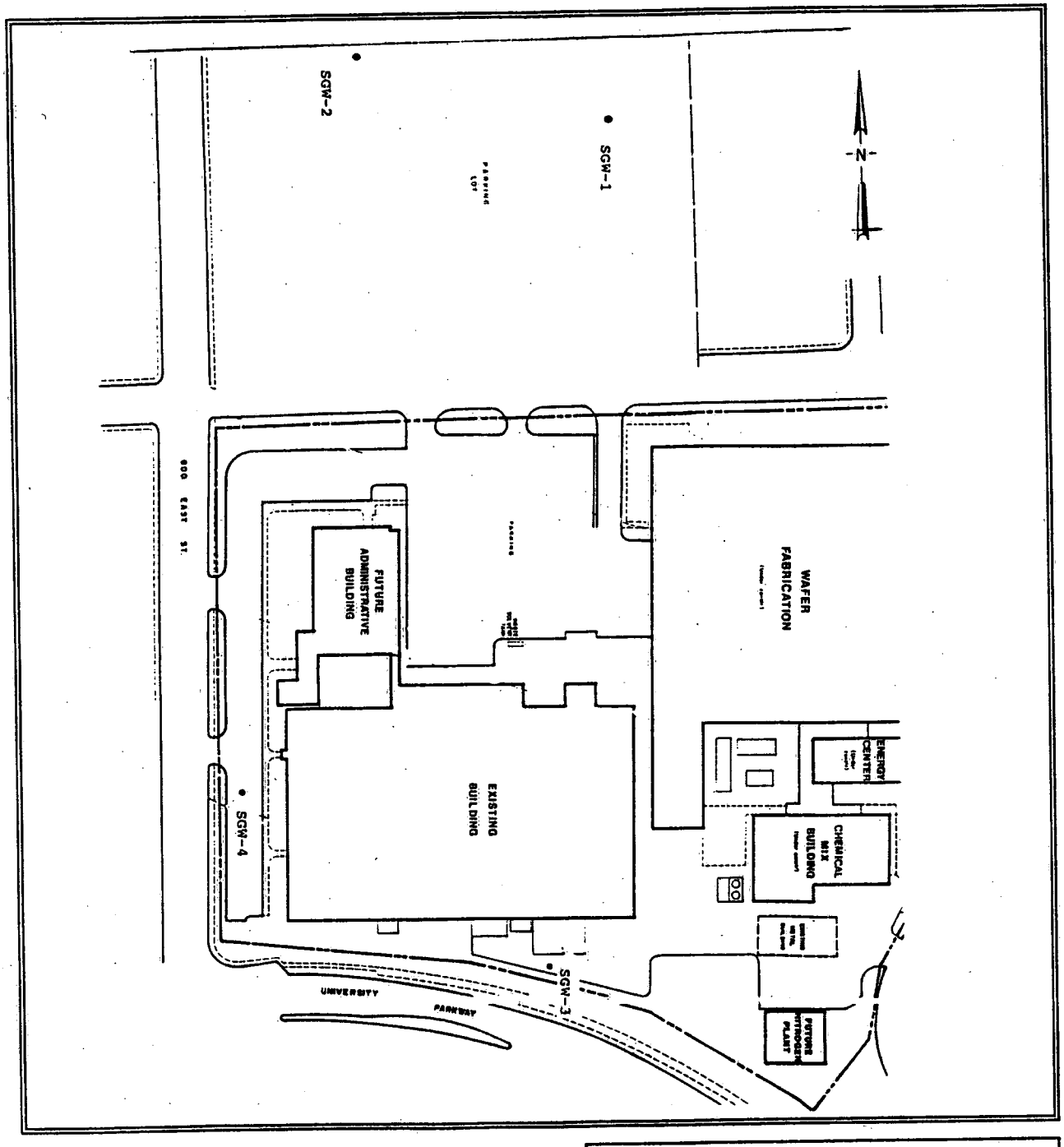
Figure 1

By	Date	Scale
MJS	6/26/91	1:25,000

USGS topo.base
Salt Lake City, North.7.5"series



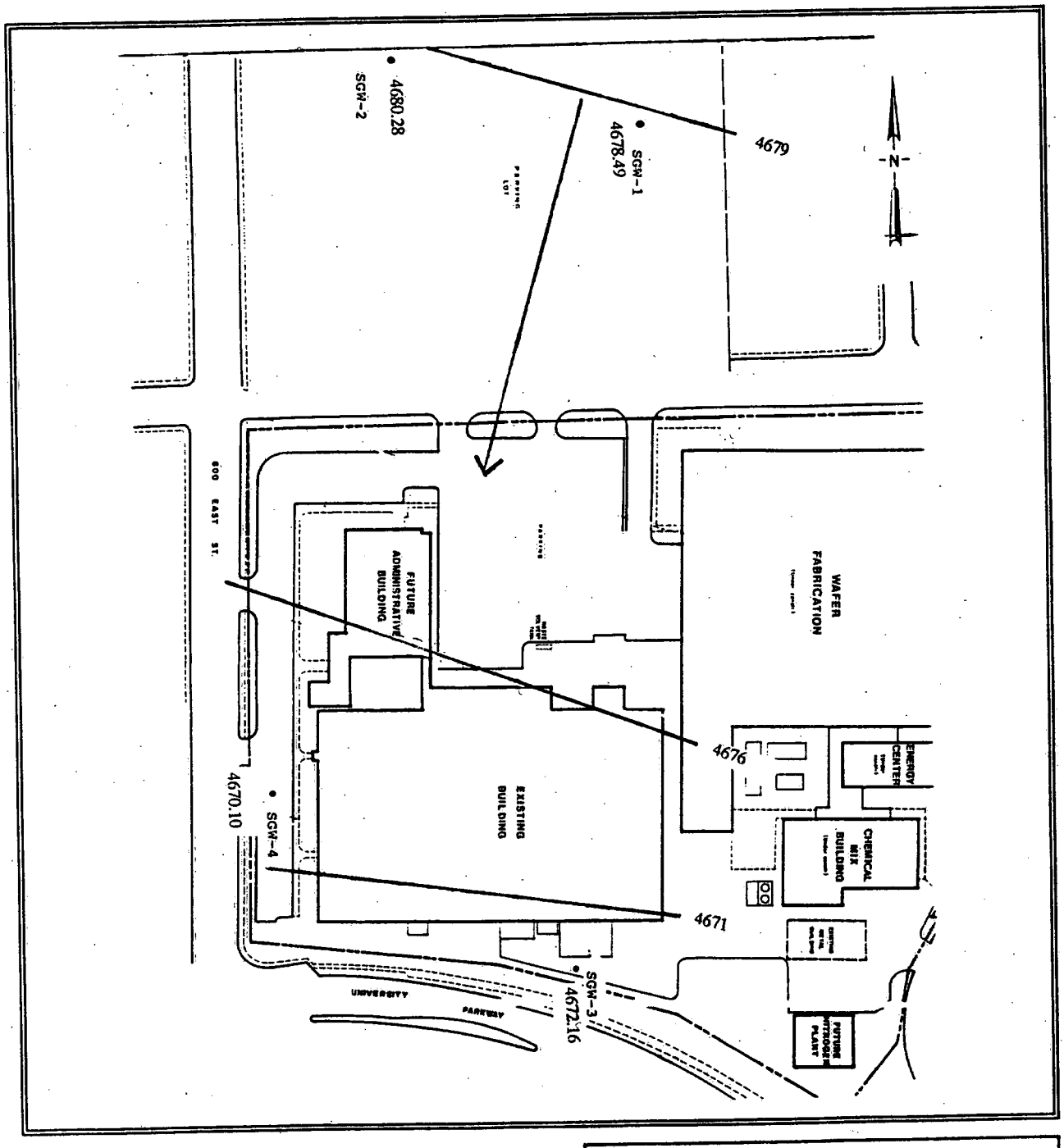
UTAH DEPARTMENT OF HEALTH		
BUREAU OF ENVIRONMENTAL RESPONSE AND REMEDIATION		
Site Sketch Signetics Corporation Orem, Utah Figure 2		
By	Date	Scale
MJS	6/26/91	NTS



KEY

• Monitoring well

UTAH DEPARTMENT OF HEALTH		
BUREAU OF ENVIRONMENTAL RESPONSE AND REMEDIATION		
Sampling Locations		
Signetics Corporation Orem, Utah		
Figure 3		
By	Date	Scale
MJS	6/26/91	NTS



ESTIMATED GROUND WATER FLOW DIRECTION

Contour levels (feet)

UTAH DEPARTMENT OF HEALTH

BUREAU OF ENVIRONMENTAL RESPONSE AND REMEDIATION

Water Table Contour Map
(June 4, 1991)
Signetics Corporation
Orem, Utah

Figure 4

By	Date	Scale
MJS	6/26/91	NTS

TABLE 1*

TEMPERATURE, SPECIFIC CONDUCTANCE AND pH MEASUREMENTS

6/4/91

WELL NUMBER	TEMPERATURE celsius	SPECIFIC CONDUCTANCE umhos	pH
SGW-1**	18.8	222	7.5
SGW-2	15.2	494	7.4
SGW-3	15.8	206	7.2
SGW-4	16	218	7.7

*Readings above represent measurements taken after the wells had been purged (stabilized) and prior to sampling

**Measurements taken after only one casing of water had been removed due to slow recharge of well

TABLE 2
WATER LEVEL ELEVATIONS
(June 4, 1991)

Site	Measuring Point Elevation*	Static Water Level*	Static Water Elevation*
SGW-1	4760.6	82.11	4678.49
SGW-2	4761.1	80.82	4680.28
SGW-3	4752.9	80.74	4672.16
SGW-4	4755.2	85.10	4670.10

*Measurements in feet

TABLE 3
WATER LEVEL ELEVATIONS
EarthFax October 1989

Site	Measuring Point Elevation*	Static Water Level*	Static Water Elevation*
SGW-1	4760.6	76.8	4683.8
SGW-2**	4761.1	-	-
SGW-3	4752.9	76.8	4676.1
SGW-4	4755.2	77.6	4677.6

*Measurements in feet

**SGW-2 was not installed until 5/91

ATTACHMENT 1

ATTACHMENT 5

LOG OF EXPLORATORY BORING

SHEET 1 of 3

PROJECT NUMBER 377-3.1 BORING NO. 1

BY SMM DATE 3/24/82 SURFACE ELEV. 4760.6

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
					> 50	5			Asphalt (GM) Gray sandy silty GRAVEL - dry to damp, medium dense (ML) Brown gravelly clayey SILT - damp, stiff (gray, slightly sandy, very hard)
					> 50	10			(GW) Brown coarse sandy GRAVEL - damp, very dense, slightly silty (SW) Gray silty gravelly fine SAND - dry, very dense
						15			(GP) Gray coarse GRAVEL - dry, dense to very dense, cobbles up to 5"
						20			(large cobbles up to 9")
					28	25			(GW) Tan silty sandy GRAVEL - damp, medium dense
						30			(large cobbles, dense drilling)
						35			(SW) Tan coarse gravelly SAND - damp, dense (GW) Tan coarse sandy GRAVEL - dry, dense drilling
						40			

REMARKS: Boring was converted to a monitoring well with the installation of 120' of 8" steel well casing. The bottom 10' of pipe was perforated. A concrete seal was placed in the annular space from 10' to the surface.

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

SHEET 2 of 3

PROJECT NUMBER 377-3.1 BORING NO. 1

BY SMM DATE SURFACE ELEV. 4760.6

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
						45			(some smaller rounded to subrounded gravel)
						50			(continued coarse gravel and cobbles)
						55			
						60			
						65			(some silt and sand)
						70			(SW) Tan slightly clayey gravelly silty SAND
						75			(GP) Tan coarse GRAVEL, contains cobbles - very dense
						80			

REMARKS:

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

SHEET 3 of 3

PROJECT NUMBER 377-3.1

BORING NO. 1

BY SVM DATE

SURFACE ELEV. 4760.6

CLASSIFICATION DATA			FIELD DATA		Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Strength (TSF)	Penetration (Blows/Ft.)			
					85			
					90			(some coarse sand at 92')
					95			(first significant water at 98')
					100			(SW) Tan fine to medium SAND with some fine gravel (GW) Tan to gray coarse sandy GRAVEL
					105			(SP) Light brown fine to medium SAND
					110			(silty in places)
					115			(coarse sand with depth)
					120			(CL) Tan to gray CLAY with some fine sand and gravel BOTTOM OF BORING

REMARKS:

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

PROJECT NUMBER 377-3.1 BORING NO. 2

BY SMM DATE 3/25/82 SURFACE ELEV.

CLASSIFICATION DATA			FIELD DATA						DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)	Depth in Ft.	Ground Water Levels	Samples	
									Asphalt
									(GM) Brown sandy silty GRAVEL - dry to damp, medium dense
					17	5			
					22	10			(GW) Tan to gray sandy GRAVEL - damp, medium dense
									(some large cobbles, decreasing sand, dry, dense)
					39	15			BOTTOM OF BORING

REMARKS: After completion of boring, hole was backfilled to the surface with native material.

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

PROJECT NUMBER 377-3.1

BY SMM DATE 3/30/82

BORING NO. 3

SURFACE ELEV. 4752.9

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
									Aspnalt
									(ML) Brown gravelly SILT - damp, very stiff to hard
									(GW) Brown sandy GRAVEL - damp to moist, very dense
					>50	5			
					30	10			(some silt and large cobbles, dense)
					41	15			
						20			
						25			(GP) Brown medium to coarse GRAVEL - dry, dense
						30			(GW) Brown coarse sandy GRAVEL - dry, dense
						35			(SP) Tan to light brown fine to medium SAND with occasional fine gravel
						40			

REMARKS: Boring was converted to a monitoring well with the installation of 110' of 6" steel well casing. The bottom 10' of pipe was perforated. A concrete seal was placed in the annular space from 10' to the surface.

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

PROJECT NUMBER 377-3.1 BORING NO. 3

BY SMM DATE SURFACE ELEV. 4752.9

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/ Ft.)				
						45			(GW) Brown to gray medium to coarse GRAVEL - with some large cobbles (slight sulfur odor)
						50			(SW) Light brown to gray medium to coarse SAND with some fine gravel
						55			(GW) Tan coarse sandy GRAVEL
									(some silt to 64')
						60			
						65			
									(SP) Brown fine to medium SAND
						70			(GP-GW) Brown to gray coarse GRAVEL with cobbles
						75			(medium to coarse sandy lenses)
						80			

REMARKS:

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

SHEET 3 of 3

PROJECT NUMBER 377-3.1

BORING NO. 3

BY SMM DATE

SURFACE ELEV. 4752.9

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
						85			(fine to medium gravel with coarse sand)
						90			
						95			(first water at 98')
									(SP) Brown fine SAND
						100			(GW) Brown sandy coarse GRAVEL with some cobbles
						105			(SP) Tan fine to medium SAND with thin gravel lenses - wet
									(GW) Brown sandy well-rounded GRAVEL
						110			BOTTOM OF BORING

REMARKS:

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

PROJECT NUMBER 377-3.1 BORING NO. 1

BY SMM DATE 1/2/82 SURFACE ELEV. 4755.2

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
						0			Asphalt
									(GW) Brown to tan fine sandy GRAVEL - dry to damp, medium dense to dense
						5			(decreasing sand)
						10			(GP) Brown to tan GRAVEL - dry, very dense (large cobbles and boulders)
						15			(some sand)
						20			(GW) Brown coarse sandy GRAVEL - dry, dense (some large cobbles)
						25			
						30			(SP) Brown medium to coarse SAND
						35			(GW) Brown fine sandy GRAVEL with some cobbles
						40			(SW) Tan to brown medium to coarse SAND with some fine gravel

REMARKS: Boring was converted to a monitoring well with the installation of 150' of 6" steel well casing. The bottom 10' of pipe was perforated. A concrete seal was placed in the annular space from 10' to the surface.

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

PROJECT NUMBER 377-3.1

BY SMM DATE

BORING NO. 4

SURFACE ELEV. 4755.2

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasti-city Index		Compres-sive Stength (TSF)	Penetra-tion (Blows/ Ft.)				
									(SW) Tan to brown medium to coarse SAND with some fine gravel
									(GW) Brown coarse sandy GRAVEL, medium to coarse
						45			
									(some fine to medium thin sandy lenses)
						50			
						55			
						60			
						65			
						70			
						75			
						80			

REMARKS:

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

SHEET 3 of 4

PROJECT NUMBER 377-3.1

BORING NO. 4

BY SMM DATE

SURFACE ELEV. 4755.2

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasti-city Index		Compres-sive Stenqth (TSF)	Penetra-tion (Blows/ Ft.)				
						85			(GW) Tan medium to coarse sandy GRAVEL, silty in places
						90			(some fine sand and silty lenses)
						95			(decreasing silt)
						100			(rounded medium to coarse gravel)
						105			(first water at 100')
						110			(SW-SP) Tan to brown fine to medium SAND
						115			
						120			

REMARKS:

EMCON ASSOCIATES

LOG OF EXPLORATORY BORING

SHEET 4 of 4

PROJECT NUMBER 377-3.1

BORING NO. 4

BY SMM DATE

SURFACE ELEV. 4755.2

CLASSIFICATION DATA			FIELD DATA			Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index		Compressive Stength (TSF)	Penetration (Blows/Ft.)				
						125			(SW-SP) Tan to brown fine to medium SAND
						130			
						135			
						140			(CL) Blue-gray CLAY with trace fine sand and gravel
						145			
						150			(SW) Black fine to medium SAND
						155			
						160			BOTTOM OF BORING

REMARKS:

EMCON ASSOCIATES

November 12, 1990

EarthFax

EarthFax
Engineering Inc.
Engineers/Scientists
7324 South 1300 East
Suite 100
Midvale, Utah 84047
Telephone 801-561-1555

James Cochran
Signetics Company
1275 South 800 East
Orem, Utah 84058

Subject: Analytical Results from MW-4

Dear Jim:

On July 29, 1990, EarthFax Engineering, Inc. supervised the retrofit of monitoring well MW-4 at your Orem facility. This retrofit was requested since silt had accumulated in the bottom of the existing 6-inch diameter slotted well. Retrofitting operations were performed by Zimmerman Well Service of Magna, Utah.

Accumulated silt was cleaned from the existing well using compressed air and a roller bit from a rotary drilling rig. The interior of the well was then completed to a total depth of 154.4 feet below ground surface as follows (from the bottom up):

154.4' - 139.4'	4-inch diameter stainless steel screen (wire-wound, 10-slot)
139.4' - 60.0'	4-inch diameter stainless steel blank casing
60.0' - surface	4-inch diameter schedule 40 PVC blank casing

The annulus of the well (between the 4-inch and 6-inch casings) was filled with 20- to 40-mesh silica sand to a depth of 13.8 feet below ground surface. The remainder of the annulus above the sand was filled with bentonite grout.

The well was developed on August 7, 1990 by pumping with a submersible pump. Pumping occurred over a period of approximately 4 hours and 20 minutes at rates varying from 0.5 to 1.6 gallons per minute. The turbidity of the discharged water was monitored in the field during development, stabilizing at a value of 14 Nephelometric Turbidity Units (NTUs).

On October 26, 1990, EarthFax collected a groundwater sample from MW-4. The sample was collected using a bladder pump and compressed air from an oil-less compressor. The pump had been decontaminated prior to use by steam cleaning the outside of the pump and tubing and pumping distilled water through the pump and tubing.

Prior to sample collection, the static water level in the well was measured. The well was then purged with the bladder pump for approximately 2.5 hours until the quality of the water being discharged from the well stabilized with respect to pH, temperature, and specific conductance. Stabilized values of these parameters were:

Depth to Water = 79.6 ft (below top of casing)

pH = 7.42

Temperature = 15.2° C

Specific Conductance = 480 μmhos/cm @ 25° C

The sample was collected in bottles provided by the analytical laboratory (Chemtech of Murray, Utah). Samples bottles were placed on ice in an ice chest and delivered to Chemtech on the day of collection. Analyses were performed in accordance with EPA Methods 624 (Volatile Organic Compounds) and 625 (Semi-Volatile Organic Compounds). The sample was also analyzed for turbidity.

Results of the chemical analyses are attached. None of the organic compounds were present in concentrations that exceeded the detection limit. The turbidity of the sample was 22 NTUs.

We have appreciated the opportunity to assist you in this project. Please contact us if you have any questions.

Sincerely,

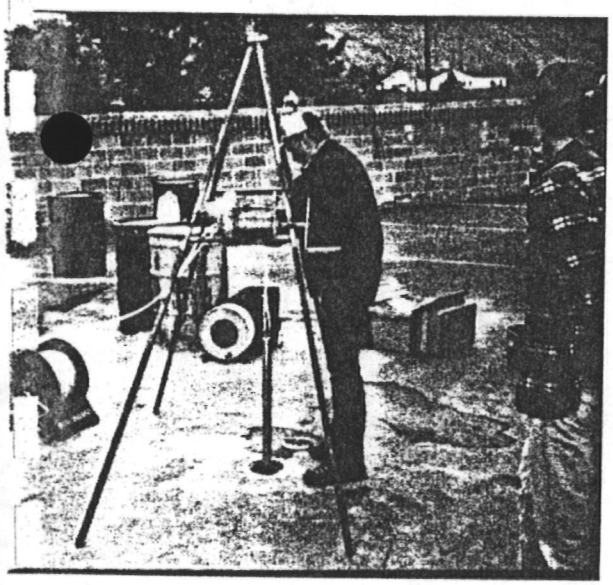
Richard B. White

Richard B. White, P.E.
Principal Hydrologist

Enclosure

ATTACHMENT 2

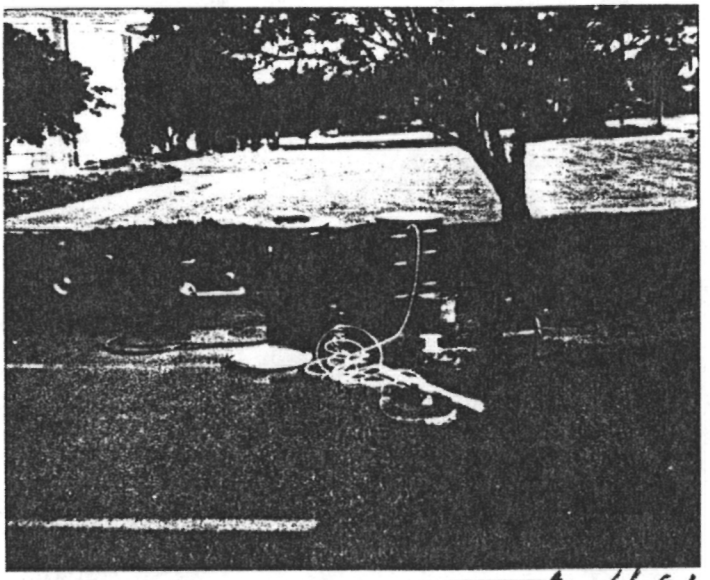
#1



S-GW-2
4" Pump; Bailer

Looking West
6-4-91
MJ SK

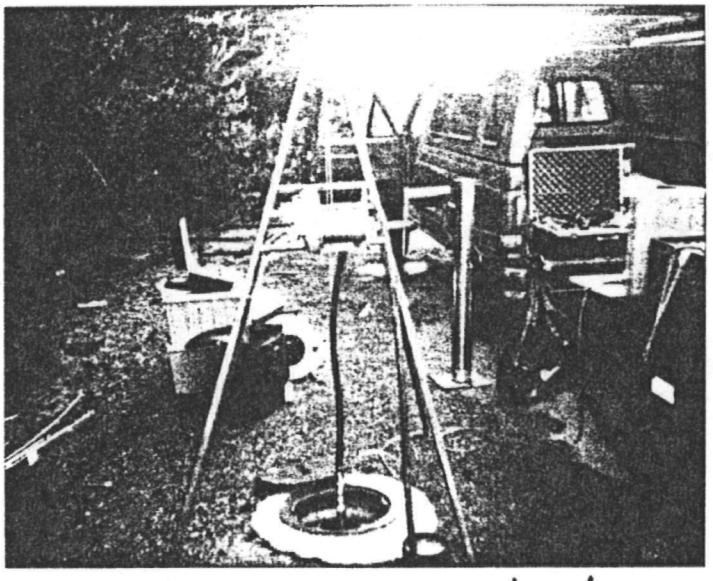
#2



S-GW-4
Signetics
Bladder Pump/purge

6-4-91
Looking South
MJ SK

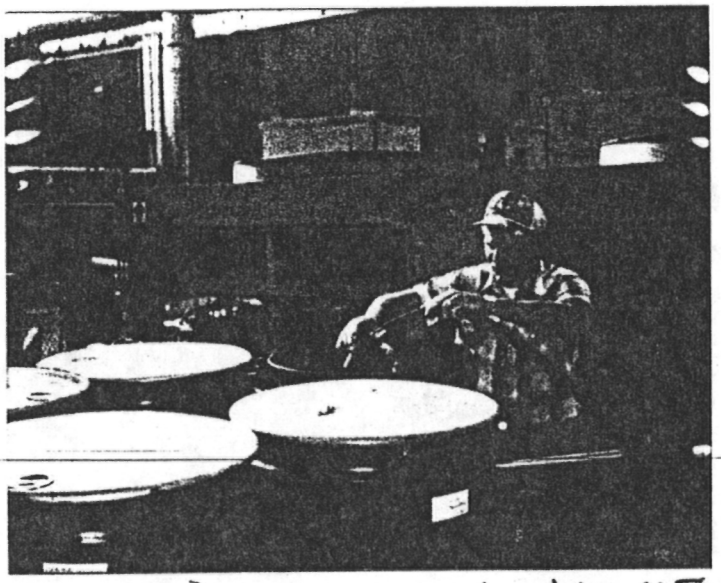
#3



S-GW-3
Groano-Fos pump

Looking West
6-4-91
MJ SK

#4



S-GW-3
Water Parameters
pH, Spec. Cond, temp.

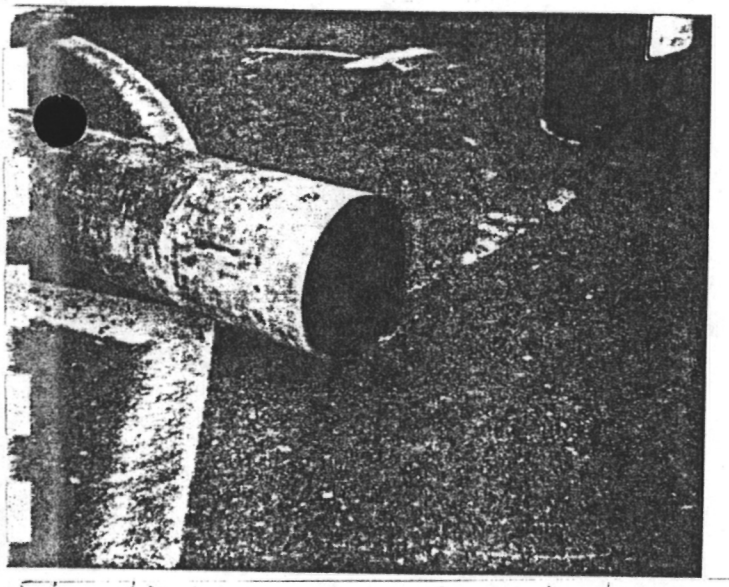
Looking NE East
MW-5D

#5

S-GW-4 2010 6-4-91
VOA Sample
Signature

Looking South
MW-5

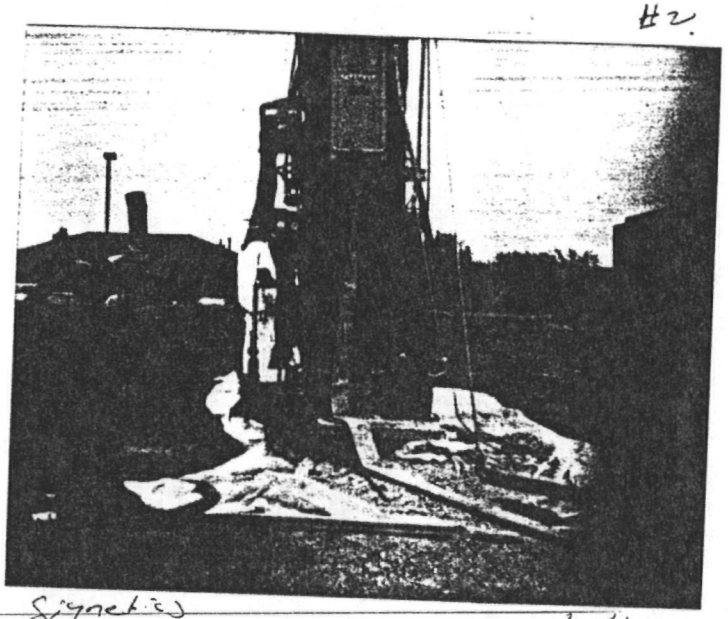
#1



Signatics
5-8-91
Installation of
background well

Section of casing
duct 1" down on
threads

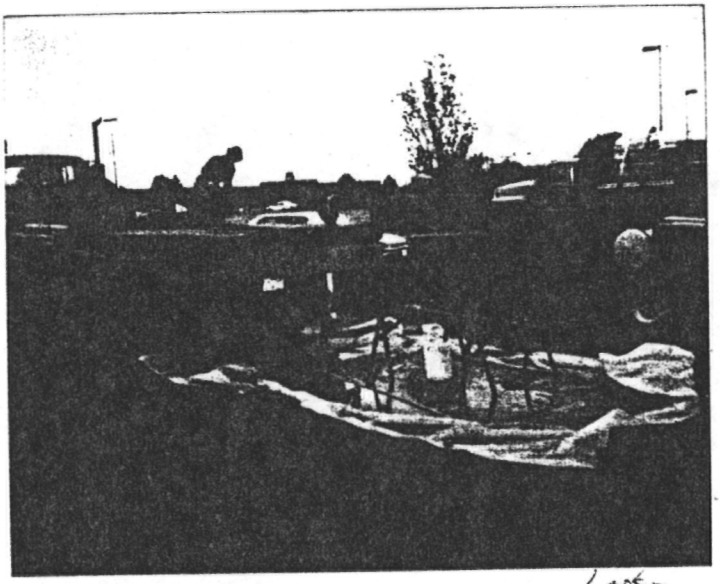
#2



Signatics
5-9-91
Air Rotary Drilling
Background well

Looking
West

#3



Signatics
5-9-91
Decontamination area
Steam cleaning of casing

Looking
Southeast

ATTACHMENT 3

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Inorganic Traffic Report

(For Inorganic CLP Analysis)

SAS No. (if applicable)

Case No. 1657L

1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier
		8	LOOK/BERR		

Regional Information

Sampler (Name): Michael Stark

Airbill Number

Non-Superfund Program

Sampler Signature: Michael Stark

5. Ship To: Natural Resources Lab, 409 Corporate Circle, Golden, CO 80401, Attn: Richard Schaffer, 303-278-1888

Site Name: Magnetics

3. Type of Activity: ENF ☐ ER ☐ LSI ☒ NPLD ☐ PA ☐ RA ☐ RD ☐ STSI ☐ O&M ☐ RIFS ☐ SSI ☐ ST ☐ STPA ☐ Other ☐

City, State: Olem, UT 84

Site Spill ID

6. Preservative (Enter in Column D): 1. HNO_3 2. NaOH 3. HCl 4. H_2SO_4 5. Ice only 6. Other (SAS) (Specify) N. Not preserved

7. Sample Description (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (SAS) 7. Waste (SAS) 8. Other (SAS) (Specify)

Double volume required for spike/duplicate analysis sample.

Ship medium and high concentration samples in paint cans.

See reverse for additional standard instructions.

For total or dissolved metals, check only one RAS analysis per each sample.

CLP Sample Numbers (from labels)	A Enter # from Box 7	B Conc. Low Med High	C Sample Type: Comp./ Grab	D Preservative from Box 6	E - RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc. Nitrate/ Nitrite	Low Conc. Fluoride	High pH	High Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/ Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Org. Samp. No.	
MHe581	2	L	G	1	X	X						8-26201	S-GW-1	6-4-91-16:00	MSJ		
MHe582	2	L	G	1	X	X						8-2602	S-GW-2	6-4-91-10:00	MSJ		
MHe583	2	L	G	1	X	X						8-2605 82606	S-GW-3	6-4-91-18:50	MSJ		Double
MHe584	2	L	G	1	X	X						8-2607	S-GW-4	6-4-91-20:00	MSJ		
MHe585	2	L	G	1	X	X						8-2608	S-GW-5	6-4-91-16:10	MSJ		
MHe586	2	L	G	1	X	X						8-2609	S-GW-9	6-4-91-17:30	MSJ		

TR

Shipment for Case complete? (Y/N)

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Michael Stark	6-5-91 9:00				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	Is custody seal intact? Y/N/none

Split Samples ☒ Accepted ☐ Declined (Signature) EARTH FAX GUY George Greenlight

EPA Form 9110-1 (Rev. 11-90) Replaces EPA Form (2075-6), previous edition which may be used

DISTRIBUTION:
Green - Region Copy Pink - SMO Copy White - Lab Copy for Return to SMO Yellow - Lab Copy

Inorg-1

002718

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

EPA

Organic Traffic Report
(For CLP Use Only)

Case Number: 16576

SAS No. (if applicable):

1. Type of Activity (Check one)

- [ ] ENF
- [ ] ER
- [ ] ESI
- [ ] NPLD
- [ ] O&M
- [ ] PA
- [ ] RA
- [ ] RD
- [ ] RIFS
- [x] SI
- [ ] ST
- [ ] STPA
- [ ] STSI
- [ ] Other *(Specify)*

Non-Superfund Program:

Site Name: Signetics

City, State: Orem, Utah

Site Spill ID:

2. Region Number: 8

Sampling Co: UDOH/Bear

Sampler (Name): M. Storck

3. Ship To:
Gulf South Environmental Lab
6801 Press Drive, East Bldg
New Orleans, LA 70126
Attn: Kathleen Hermo
504-283-4223

4. Date Shipped: 6-5-91

Airbill Number: 57709132

Carrier: A-B Beare

Triple volume required for matrix spike/duplicate aqueous sample.

Ship medium and high concentration samples in paint cans.

See reverse for additional instructions.

5. Sample Description *(Enter in Column A)*

1. Surface Water
2. Ground Water
3. Leachate
4. Rinsate
5. Soil/Sediment
6. Oil (SAS)
7. Waste (SAS)
8. Other (SAS) *(Specify)*

CLP Sample Number (From labels)	(A) Sample Description (From box 1)	(B) Concentration L=low M=med H=high	(C) RAS Analysis VOA	BNA	Pest/PCB	(D) Special Handling	(E) Station Location	(F) Date/Time of Sample Collection	(G) Corresponding CLP Inorganic Sample Number
HH429	2	L	X	X	X		S-GW-1	6-4-91 - 10:00	
HH430	2	L	X	X	X		S-GW-2	6-4-91 - 10:00	
HH439	2	L	X	X	X		S-GW-3	6-4-91 - 18:50	triple
HH440	2	L	X	X	X		S-GW-4	6-4-91 20:50	
HH441	2	L	X	X	X		S-GW-5	6-4-91 - 16:10	
HH442	2	L	X	X	X		S-GW-7	6-4-91 - 17:35	
HH443	2	L	X				S-GW-6	6-4-91 - 9:00	

EPA Form 9110-2 (8-88) Replaces EPA Form 2075-7, which may be used.

Blue - SMO Copy Pink - Region Copy White - Lab Copy for Return to SMO Yellow - Lab Copy

U.S. ENVIRONMENTAL PROTECTION AGENCY
Environmental Services Division

REGION VIII, ... DENVER ... LAB
999 18TH. STREET
DENVER, CO. 80202-2413

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	Signalco

SAMPLERS: *(Signature)* M. Storck

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA'S	BNA'S + PEST/PCBS					REMARKS: TAG NO	TAG. NO
S-GW-1	6-4-91	16:00		X	NE Parking Lot-Well	4	X	X					8-26301 - 8-26317 8-26302 -	HH42[illegible]
S-GW-2	6-4-91	10:00		X	Background	4	X	X					8-26303 - 8-26307 8-26304	HH43[illegible]
S-GW-3	6-4-91	18:50		X	West END	12	X	X					8-26305 → 8-26310 8-26322 → 8-26324	HH43[illegible]
S-GW-4	6-4-91	20:00		X	S-West	4	X	X					8-26311 - 26325 8-26312	HH44[illegible]
S-GW-5	6-4-91	16:10		X	NE Lot-O	4	X	X					8-26313 - 26320 8-26314	HH44[illegible]
S-GW-7	6-4-91	17:[illegible]		X	Lot - ~~[illegible]~~ Q	4	X	X					8-26315 - 26321 8-26316	HH44[illegible]
S-GW-6	6-4-91	9:00		X	Lot - ~~[illegible]~~ T	2	X						8-26318	HH44[illegible]

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
M. Storck	6-5-91 7:00				

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*

Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks

Split Samples: ☒ Accepted ☐ Declined — George [illegible] (Signature)

Distribution: Original Accompanies Shipment: First Copy to Coordinator Field Files: Second Copy to Representative of Inspected Facility

R8 EPA-014B (4-21-86)

U.S. GPO 1986-671-568

EARTH FAX ENG. 8-15963

south-southwest. Therefore monitoring well SGW-2 is located hydrologically upgradient and monitoring wells SGW-1, SGW-3, and SGW-4 are located downgradient.

Monitoring well SGW-2, an upgradient well, showed a concentration of 391 parts per billion (ppb) barium. Lead was also found at this sampling location at a concentration of 24.9 ppb. The highest level of barium found at the other downgradient monitoring well locations was 82.9 ppb at SGW-1. The highest level of lead was found at 2.50 ppb at SGW-1. Inorganic data indicated the presence of several metals in the upgradient well with higher level of concentrations than the downgradient wells. Upgradient well SGW-2 shows concentrations of calcium and magnesium at 103,000 ppb and 24,000 ppb, respectively. Downgradient well SGW-1 indicated calcium and magnesium concentrations at 74,300 ppb and 23,000 ppb, respectively. Analytical data from inorganic analysis showed no concentrations above the Maximum Contaminant Level (MCL).

Organic analysis of the groundwater at Signetics indicates a small release of contaminants. Benzene was found at a concentration of 2 ppb in monitoring wells SGW-1 and SGW-4 (downgradient monitoring wells). Toluene was found at a concentration of 1 ppb in SGW-4. 2-Butanone was indicated in SGW-3 at a concentration of 23 ppb. Small amounts of acetone were found in SGW-7 and SGW-6. These two samples were QA/QC samples, a decon and trip blank. All VOA compounds identified in the groundwater are qualified with a "J". Refer to Section 5.2.1 and 5.2.2 for an explanation of the qualifiers that were used. None of the contaminants identified were present above MCLs.

No pesticides/PCBs were found in any of the groundwater samples above the CRDL.

Low concentration levels of BNA compounds were found in the groundwater. Isophorone and 2-methylnapthalene were found in SGW-4 at 1 ppb. A possible laboratory contaminant, bis(2-ethylhexyl)phthalate, was found in several of the monitoring wells. The highest concentration was found in SGW-3 at 6 ppb. Numerous Tentatively Identified Compounds (TICs) were identified in the groundwater and a complete list can be found in Appendix 1. Please refer to Tables 5 and 6 for a complete list of inorganic and organic compounds that were identified in the groundwater at the Signetics site. None of the contaminants identified were present above MCLs.

7.0 Conclusions

Based upon the analytical results shown in Tables 5 and 6 there appears to be an observed release of contaminants with respect to the groundwater.

Analytical data indicates the presence of small levels of VOAs in

the groundwater. Benzene was found in SGW-1 and SGW-4 at 2 ppb. Toluene was found in SGW-4 at 1 ppb. Benzene and toluene were not found in the upgradient monitoring well, SGW-2, above the CRDL. Low concentration levels of BNA compounds were found in the groundwater. Isophorone and 2-methylnapthalene were found in SGW-4 at 1 ppb. These compounds were not found in the upgradient well, SGW-2, above the CRDL.

The Signetics site is in an area that has a residential/industrial population. Though there are substantial target receptors in the area, due to the very low levels of contaminants that were found in the groundwater, and the covering provided by concrete, asphalt and buildings, exposure (and therefore risk) is expected to be very low. Therefore, a population data table and population map were not completed for this report.

8.0 References

EarthFax, 1989. Collection of Groundwater Quality Samples at Signetics Co., Signetics Site, Orem, Utah.

Emcon Associates, 1982. Hydrogeological and Ground-Water Quality Investigation, Signetics Site, Orem, Utah.

Utah Department of Environmental Quality, Division of Environmental Response & Remediation, 1989. Quality Assurance Project Plan, October.

____.1991. UDERR Field Activities Report, Signetics Site, Orem, Utah, June.

TABLE 5

INORGANIC RESULTS FOR GROUNDWATER SAMPLES (ug/l)
SIGNETICS
6/4/91

SAMPLE NUMBER	SGW-1	SGW-2	SGW-3	SGW-4	SGW-5	SGW-7
TRAFFIC NUMBER	MHR-581	MHR-582	MHR-583	MHR-584	MHR-585	MHR-586
SAMPLE LOCATIO	DOWNGRADIENT	UPGRADIENT	DOWNGRADIENT	DOWNGRADIENT	DUP FOR SGW-1	DECON BLANK
Aluminum	346.00	22400.00	42.30	52.20	377.00	17.20
Antimony	18.00	18.00	18.00	18.00	19.20	18.00
Arsenic	2.30	5.20	2.00	2.10	2.20	1.60
Barium	82.90	391.00	63.50	44.80	81.90	1.00
Beryllium	1.00	4.50	1.00	1.00	1.00	1.00
Cadmium	3.00	3.00	3.00	3.00	3.00	3.00
Calcium	74300.00	103000.00	52100.00	9350.00	75100.00	29.00
Chromium	5.20	17.80	7.70	5.60	6.10	4.00
Cobalt	3.00	11.10	3.00	3.00	3.00	3.00
Copper	4.40	20.50	2.00	8.10	4.00	2.00
Iron	16600.00	32600.00	15600.00	436.00	17900.00	7.50
Lead	2.50	24.90	1.00	1.00	2.50	1.00
Magnesium	23000.00	24000.00	13200.00	6270.00	22900.00	19.00
Manganese	280.00 J	590.00 J	281.00 J	32.20	308.00 J	1.00 J
Mercury	0.10	0.13	0.10	0.10	0.13	0.10
Nickel	7.00	19.60	7.00	7.00	7.00	7.00
Potassium	4570.00	10900.00	3590.00	74800.00	4410.00	303.00
Selenium	2.00	2.00	2.00	2.00 UJ	2.00	2.00
Silver	3.00	3.00	3.00	3.00	3.00	3.00
Sodium	11900.00	12900.00	12300.00	75200.00	11800.00	233.00
Thallium	2.00 UJ	2.00	2.00 UJ	2.00	2.00	2.00
Vanadium	3.00	30.20	3.00	3.00	3.00	3.00
Zinc	28.30	140.00	39.80	39.80	27.00	8.20

TABLE 6

ORGANIC DATA RESULTS FOR GROUND WATER SAMPLES (ug/l)
SIGNETICS
6/4/91

SAMPLE NUMBER	SGW-1	SGW-2	SGW-3	SGW-4	SGW-5	SGW-6	SGW-7
TRAFFIC NUMBER	HH-429	HH-430	HH-439	HH-440	HH-441	HH-443	HH-442
SAMPLE LOCATION	DOWNGRADIENT	UPGRADIENT	DOWNGRADIENT	DOWNGRADIENT	DUP/SGW-1	TRIP BLANK	DECON BLANK
VOAs							
Methylene Chloride	1 U		1 U		1 U		
Acetone						29	27
2-Butanone			23				
Benzene	2 J			2 J			
Toluene				1 J			
BNAs							
2,4-Dimethylphenol	10 UJ	10 UJ	10 UJ				
Naphthalene				1 J			
2-Methylnaphthalene				1 J			
bis (2-Ethylhexyl)phthal	1 JB	2 JB	6 JB	3 JB	1 JB		2 JB
Isophorone				1 J			
TICs- BNAs							
Heptadecane			3 JN	10 JN			
Bicyclo(4.1.0)Heptan-3-OL				2 JN			
Ethanone,1-(Methylphenyl)				6 JN			
Hexadecane				6 JN			
Dodecane, 2,7,10-Trimethyl				4 JN			
Tritetracontane				4 JN			
Cyclohexanol	3 JN	5 JN					
Butanoic Acid, 4-Chloro	4 JN	3 JN	4 JN		3 JN		
Eicosane				6 JN			

APPENDIX 2

EPA CLOSEOUT COPY

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

I. IDENTIFICATION NO.
UTD009667536

PART 1 - SITE LOCATION AND INSPECTION INFORMATION

II. SITE NAME LOCATION

01 Site Name (Legal, common or descriptive name of site)
SIGNETICS CORPORATION

02 Street, route no. or specific location identifier
1275 SOUTH 800 EAST

03 City
OREM

04 State UT 05 Zip Code 84057 06 County UTAH

07 County Code 49 08 Congress District 1

09 Coordinates (d,m,s)
Latitude 40, 16, 26.0
Longitude 111, 16,44.0

10 Type of ownership (Check one)
X Private
Federal
State
Unknown
County
Municipal
Other:

III. INSPECTION INFORMATION

01 Date Of Inspection
06/04/91

02 Site Status
X Active
Inactive

03 Years Of Operation
Beginning Year 1980
Ending Year
Unknown

04 Agency Performing Inspection (Check all that apply)
EPA
EPA Contractor:
Municipal
Municipal Contractor:
X State
State Contractor:
Other:

05 Chief Inspector	06 Title	07 Organization	08 Telephone No.
MICHAEL STORCK	E.H. SCIENTIST	UDERR	801-536-4100

09 Other Inspectors	10 Title	11 Organization	12 Telephone No.
JASON KNOWLTON	E.H. SCIENTIST	UDERR	801-536-4100

13 Site Representatives Interviewed	14 Title	15 Telephone No.
A. JAMES COCHRANE	A. ENV. PLT. MNGR	A. 255-6600
B.	B.	B.
C.	C.	C.

16 Address A. 1275 SOUTH, 800 EAST, OREM, UTAH, 84057
B.
C.

17 Access Gained By (Check one)
X PERMISSION
WARRANT

18 Time Of Inspection

19 Weather Conditions

IV. INFORMATION AVAILABLE FROM

01 Contact	02 Agency/Organization	03 Telephone
MICHAEL STORCK	UDERR	801-536-4100

04 Person Responsible For Site Inspection Form	05 Agency/Organization
MICHAEL STORCK	UDERR

06 Telephone No. 801-536-4100
07 Date 09/17/91

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 Physical States (Check all that apply)

Solid	Slurry	
Powder, Fines	X Liquid	
X Other SLURRY (Specify)	Gas	

02 Waste Quantity at Site (Measures of waste quantities must be independent)

UNKNOWN

Tons
Cubic Yards
Number of Drums

03 Waste Characteristics (Check all that apply)

X Toxic	Persistent	X Flammable	Explosive	Not Applicable
Corrosive	Soluble	Ignitable	Reactive	
Radioactive	Infectious	Highly Volatile	Incompatible	

III. WASTE TYPE

Category	Substance Name	01 Gross Amount	02 Unit of Measure	03 Comments
X	SLU Sludge	UNKNOWN		
	OLW Oily Waste			
	SOL Solvents			
	PSD Pesticides			
	OCC Other Organic Chem			
	IOC Inorganic Chem			
	ACD Acids			
	BAS Bases			
	MES Heavy Metals			

IV. HAZARDOUS SUBSTANCES (See appendix for most frequently cited CAS numbers)

01 Category	02 Substance Name	03 CAS Number	04 Storage/ Disposal Method	05 Concen- tration	06 Measure of Concen- tration
	BENZENE			2	ug/l
	TOLUENE			1	ug/l

V. FEEDSTOCKS (See appendix for CAS numbers)

Category	01 Feedstock Name	02 CAS #	Category	01 Feedstock Name	02 CAS #
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (CITE specific references, e.f., state files, sample analysis, reports)

01 UBSHW, 1990, SAMPLING PLAN, SIGNETICS CORPORATION
02 UDERR, 1991, FIELD ACTIVITIES REPORT
03 UDERR, 1991, ANALYTICAL RESULTS REPORT
04

II. HAZARDOUS CONDITIONS AND INCIDENTS

A. 01 GROUNDWATER CONTAMINATION 02 Observed Date 06/04/91 Potential Alleged
03 Population Potentially Affected 400
04 Narrative Description:
GROUNDWATER GENERALLY FLOWS SOUTH-SOUTHWEST DIRECTION. OREM CITY WELL, A MUNICIPAL DRINKING WELL, IS LOCATED ONE-HALF MILE UPGRADIENT FROM SITE. GROUNDWATER MEASUREMENTS TAKEN BY UDERR PERSONNEL IN JUNE 1991, LOCATED GROUNDWATER APPROXIMATELY 76 FEET DEEP IN A PERMEABLE COURSE SAND AND GRAVEL LAYER. DATA INDICATES BENZENE AND TOLUENE IN ONE OF THE DOWNGRADIENT WELLS (JUNE 1991).

B. 01 SURFACE WATER CONTAMINATION 02 Observed Date 06/04/91 Potential Alleged
03 Population Potentially Affected 400
04 Narrative Description:
PROVO RIVER RUNS ONE-QUARTER MILE SOUTHEAST OF THE FACILITY. PROVO RIVER RUNS INTO UTAH LAKE. THERE IS NO APPARENT SURFACE WATER CONTAMINATION DUE TO ASPHALT CAP.

C. 01 CONTAMINATION OF AIR 02 Observed Date __/__/__ Potential Alleged
03 Population Potentially Affected
04 Narrative Description:
THE SITE IS COVRED BY CEMENT AND ASPHALT. THERE IS LOW POTENTIAL FOR AIR RELEASE.

D. 01 FIRE/EXPLOSIVE CONDITIONS 02 Observed Date __/__/__ Potential Alleged
03 Population Potentially Affected 1900
04 Narrative Description:
NO RECORDED HISTORY. UNDERGROUND TANKS CONTAINING FLAMMABLE SOLVENTS WERE REMOVED. THERE ARE SOME ABOVE GROUND TANKS ON-SITE.

E. 01 DIRECT CONTACT 02 Observed Date __/__/__ Potential Alleged
03 Population Potentially Affected 1360
04 Narrative Description:
THE ENTIRE FACILITY IS FENCED AND THE ENTRANCE IS SECURED BY MONITORING EQUIPMENT AND SECURITY GUARDS. THE AREA CONTAINING FLAMMABLE SOLVENTS IS SECURED. THE AREA WHERE SPILL OCCURRED IS COVERED BY ASPHALT.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

F. 01 CONTAMINATION OF SOIL 02 Observed Date __/__/__ Potential
03 Area Potentially Affected Alleged
04 Narrative Description:
SOIL SAMPLES COLLECTED NOVEMBER 1983, INDICATED NO DETECTABLE CONTAMINATION. NO SOIL SAMPLES WERE COLLECTED DURING THE SAMPLING INVESTIGAITON, JUNE 1991.

G. 01 DRINKING WATER CONTAMINATION 02 Observed Date 06/04/91 X Potential
03 Population Potentially Affected 64000 Alleged
04 Narrative Description:
AN OREM CITY DRINKING WATER WELL IS LOCATED A HALF-MILE SOUTH OF THE FACILITY, SAMPLE ANALYZED SHOWED NO EVIDENCE OF CONTAMINATION.

H. 01 WORKER EXPOSURE/INJURY 02 Observed Date 06/04/91 X Potential
03 Workers Potentially Affected 1200 Alleged
04 Narrative Description:
THE ENCLOSED AREA CONTAINING SOLVENTS IS CLOSELY MONITORED BY SECURITY GUARDS.

I. 01 POPULATION EXPOSURE/INJURY 02 Observed Date 06/04/91 X Potential
03 Population Potentially Affected 64000 Alleged
04 Narrative Description:
IF DRINKING WATER WERE CONTAMINATED POSSIBLE FOR POTENTIAL EXPLOSURE/INJURY.

J. 01 DAMAGE TO FLORA 02 Observed Date __/__/__ Potential
03 Narrative Description: Alleged
NO RECORDED HISTORY.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

K. 01 DAMAGE TO FAUNA 02 Observed Date __/__/__ Potential Alleged
03 Narrative Description:
NO RECORDED HISTORY.

L. 01 CONTAMINATION OF FOOD CHAIN 02 Observed Date __/__/__ Potential Alleged
03 Narrative Description:
NO FISHERIES OR POTENTIAL FOR SURFACE WATER RELEASE NEAR THE SITE.

M. 01 UNSTABLE CONTAINMENT OF WASTES 02 Observed Date __/__/__ Potential
(Soils/Runoff/Standing Liquids/Leaking Drums) X Alleged
03 Population Potentially Affected
04 Narrative Description:
THE NONCORROSIVE FLAMMABLE SOLVENTS WERE CONTAINED IN UNDERGROUND TANKS IN THE PAST. THE TANKS WERE REMOVED AND DISPOSED OF IN 1983. THE SOIL WAS CONTAMINATED FROM THE SPRAYING OF UNKNOWN QUANITIES OF SOLVENTS ON THE PARKING LOT, WHICH HAS SINCE BEEN COVERED BY ASPHALT.

N. 01 DAMAGE TO OFFSITE PROPERTY 02 Observed Date __/__/__ Potential Alleged
03 Narrative Description:
NO RECORDED HISTORY.

O. 01 CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS 02 Observed Date __/__/__
03 Narrative Description: Potential Alleged
NO RECORDED HISTORY. AREA WHERE UNKNOWN QUANTITY OF SOLVENT WAS SPRAYED IS COVERED BY ASPHALT. POTENTIAL OF SEWER/STORE DRAINS/WWTPS AND RUNOFF IS SMALL.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

P. 01 ILLEGAL/UNAUTHORIZED DUMPING 02 Observed Date __/__/__ Potential
03 Narrative Description: X Alleged
SPRAYING OF UNKNOWN QUANTITIES OF SOLVENT WASTES OCCURED UNTIL NOVEMBER 1980.

Q. 01 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS:
THERE ARE CURRENTLY ABOUT TWENTY-ONE WASTE STREAMS ON-SITE. NO HAZARDOUS SPILLS ON-SITE HAVE BEEN REPORTED.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 64000

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.f., state files, sample analysis, reports)

01 SITE VISITED DATED JUNE 4, 1991
02 UDERR OFFICE FILES
03 UDERR, 1990, SAMPING PLAN, SIGNETICS CORPORATION
04
05

II. PERMIT INFORMATION

01 Type Of Permit Issued	02 Permit No.	03 Date Issues	04 Expira/Date	05 Comments
X NPDES		/ /	/ /	
UIC		/ /	/ /	
AIR		/ /	/ /	
RCRA		/ /	/ /	
RCRA INTERIM STATUS		/ /	/ /	
SPCC PLAN		/ /	/ /	
STATE		/ /	/ /	
LOCAL		/ /	/ /	
OTHER		/ /	/ /	
NONE		/ /	/ /	

III. SITE DESCRIPTIONS

01 Storage/Disposal (Ckeck all that apply)	02 Amount	03 Unit Of Measure	04 Treatment (Check all that apply)
Surface Impoundment			Incineration
Pile			Underground Injection
Drums, Above Ground			Chemical/Physical
X Tank, Above Ground			Biological
Tank, Below Ground			Waste Oil Processing
Landfill			Solvent Recovery
Landfarm			Other Recycling/Rcvry
Open Dump			Other
Other			

05 Buildings On Site:

06 Area Of Site: (Acres)

07 Comments:

IV. CONTAINMENT

01 Containment Of Wastes (Check one)

X Adequate, Secure — Inadequate, Poor

Moderate — Insecure, Unsound, Dangerous

02 Description Of Drums, Diking, Liners, Barriers, Etc.:
55-GALLON DRUMS ON-SITE; STORAGE OF VARIOUS CHEMICALS.

V. ACCESSIBILITY

01 Waste Easily Accessible: Yes X No

02 Comments:
SITE IS SECURED WITH FENCE/LOCKED GATE; MONITORED BY SECURITY GUARDS.
AREA WHICH SPILL OCCURRED IS COVERED WITH ASPHALT.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

01 UDERR, 1990, SAMPLING PLAN
02 UDERR, 1991, FIELD ACTIVITIES REPORT
03
04
05

II. DRINKING WATER SUPPLY

01 Type Of Drinking Supply (Check as applicable)	Surface	Well	02 Status: Endangered	Affected	Monitored	03 Distance To Site
Community		X				0.50(mi)
Non-Community						0.00(mi)

III. GROUNDWATER

01 Groundwater Use In Vicinity (Check one)

A. Only Source For Drinking
B. Commercial, Industrial, Irrigation
C. Not Used, Unusable
D. Drinking (Other sources available)
X E. Commercial, Industrial, Irrigation (No other water sources available)

02 Population Served By Groundwater 64000
03 Distance To Nearest Drinking Water Well 0.50(mi)
04 Depth To Groundwater 76(ft)
05 Direction Of Groundwater Flow SOUTHWEST
06 Depth To Aquifer Concerned 480-600(ft)
07 Potential Yld Of Aquifer UNKNOWN(gpd)
08 Sole Source Aquifer Yes X No
09 Description Of Wells (Including usage, depth and location relative to population and buildings)
OREM CITY DRINKNG WATER WELL; OVER 480 FEET IN DEPTH; LOCATED APPROXIMATELY ONE-HALF MILE SOUTH OF THE SITE.

10 Recharge Area Yes X No Comments:
11 Discharge Area X Yes No Comments:

IV. SURFACE WATER

01 Surface Water Use (Check one)

A. Reservoir, Recreation Drinking Water Source
X B. Irrigation, Economically Important Resources
C. Commercial,Industrial
D. Not Currently Used

02 Affected/Potentially Affected Bodies Of Water

Name:	Affected:	Distance To Site:
PROVO RIVER		0.25(mi)
		0.00(mi)
		0.00(mi)
		0.00(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 Total Population Within (Number of persons):
A. One (1) Mile Of Site 1360 B. Two (2) Miles Of Site 27500 C. Three (3) Miles Of Site 47200
02 Distance To Nearest Population .25(mi)
03 Number Of Buildings Within Two (2) Miles Of Site 72500
04 Distance To Nearest Off-Site Building 0.1(mi)
05 Population Within Vicinity Of Site (Provide narrative description of nature of population within vicinity of site, e.g., rural, village densely populated urban area)
THE SITE IS LOCATED IN AN INDUSTRIAL/RESIDENTIAL AREA THAT IS MODERATELY POPULATED.

VI. ENVIRONMENTAL INFORMATION

01 Permeability Of Unsaturated Zone (Check one)
A. 10^{-6} - 10^{-8} cm/sec
X B. 10^{-4} - 10^{-6} cm/sec
C. 10^{-2} - 10^{-3} cm/sec
D. Greater Than 10^{-3} cm/sec
02 Permeability Of Bedrock (Check one)
A. Impermeable Less than 10^{-6} cm/sec
B. Relatively Impermeable 10^{-4} - 10^{-6} cm/sec
X C. Relatively Permeable 10^{-2} - 10^{-4} cm/sec
D. Very Permeable Greater than 10^{-2} cm/sec
03 Depth To Bedrock UNKNOWN(ft)
04 Depth Of Contaminated Soil Zone UNKNOWN(ft) 05 Soil pH 7-8
06 Net Precipation 3.0(in) 07 One Year 24 Hour Rainfall 2.00(in)
08 Slope:
A. Site slope 2(%) B. Direction Of Site Slope SOUTH
C. Terrain Average Slope 0-1(%)
09 Flood Potential Site Is In 100 Year Flood Plain
10 Yes X No Site Is On Barrier Island, Coastal High Hazard Area, Riverine Floodway
11 Distance To Wetlands (5 Acre minimum)
A. Estuarine 0.00(mi) B. Other 0.00(mi)
12 Distance To Critical Habitat (Of endangered species)
A. 0.00(mi) B. Endangered Species:
13 Land Use In Vicinity Distance To:
A. Residential Areas: Commercial/Industrial 0.10(mi)
B. National/State Parks, Forests, Or Wildlife Reserves 7.00(mi)
C. Agricultural Lands: Prime Agricultural Land 0.00(mi)
D. Agricultural Lands: Agricultural Land 1.00(mi)
14 Description Of Site In Relation To Surrounding Topography:
THE SITE IS ZONED FOR INDUSTRIAL AND IS BOUNDED ON THE SOUTH BY UNIVERSITY PARKWAY, TO THE WEST BY 800 EAST STREET, AND ON THE EAST BY A SMALL FRONTAGE ROAD.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

01 UDERR, 1990, SAMPLING PLAN
02 UDERR, 1991, FIELD ACTIVITIES REPORT
03 SITE INSPECTION, 1991
04
05

II. SAMPLES TAKEN

	01 Number Of Samples Taken	02 Samples Sent To	03 Estimated Date Results Available
Groundwater	4	GULF SOUTH ENVIRONMENTAL	08/15/91
Surface Water			/ /
Waste			/ /
Air			/ /
Runoff			/ /
Spill			/ /
Soil			/ /
Vegetation			/ /
Other			/ /

III. FIELD MEASUREMENTS TAKEN

01 Type	02 Comments
pH, TEMP	THESE MEASUREMENTS TAKEN OF GROUNDWATER SAMPLES COLLECTED.
H Nu	READINGS TAKEN AT WELL CASING HEAD SPACE.

IV. PHOTOGRAPHS AND MAPS

01 Type: Ground Aerial

02 In Custody Of (Name of organization or individual):

03 Maps: X Yes No

04 Location Of Maps:
UDERR FILES

V. OTHER FIELD DATA COLLECTED (Provide Narrative Description)

NOT APPLICABLE.

VI. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UDERR FILES
02 SITE INSPECTION, 1991
03
04
05

II. CURRENT OWNER(S)		PARENT COMPANY (If Applicable)	
01 Name SIGNETICS CORPORATION	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#) 811 EAST ARQUES AVENUE		10 Street Address (P.O.B. or RFD#)	
04 SIC Code: 05 City: SUNNYVALE 07 Zip Code: 94086	06 State: CA	11 SIC Code: 12 City: 14 Zip Code:	13 State:
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code: 05 City 07 Zip Code:	06 State:	11 SIC Code: 12 City: 14 Zip Code:	13 State:
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code: 05 City: 07 Zip Code:	06 State:	11 SIC Code: 12 City: 14 Zip Code:	13 State:

III. PREVIOUS OWNERS List Most Recent First		REALTY OWNER(S) If Applicable, List Most Recent First	
01 Name NOT APPLICABLE	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code: 05 City: 07 Zip Code:	06 State:	11 SIC Code: 12 City: 14 Zip Code:	13 State:
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code: 05 City: 07 Zip Code:	06 State:	11 SIC Code: 12 City: 14 Zip Code:	13 State:

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UDERR FILES
02
03
04
05

II. CURRENT OPERATOR (Provide If Different From Owner) / **OPERATOR'S PARENT COMPANY (If Applicable)**

01 Name SIGNETICS CORPORATION	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#) 1275 SOUTH 800 EAST		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City: OREM	06 State: UT	14 City:	15 State:
07 Zip Code: 84057		16 Zip Code:	
08 Years Of Operation 1980-PRESENT (11 YEARS)			
09 Name Of Owner			

III. PREVIOUS OPERATOR(S) (List Most Recent First; Provide Only If Different From Owner) / **PREVIOUS OPERATOR'S PARENT COMPANIES (If Applicable)**

01 Name NOT APPLICABLE	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#)		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City:	06 State:	14 City:	15 State:
07 Zip Code:		16 Zip Code:	
08 Years Of Operation			
09 Name Of Owner During This Period			
01 Name	02 D&B Number	10 Name	11 D&B Number
03 Street Address (P.O.B. or RFD#)		12 Sreet Address (P.O.B. or RFD#)	
04 SIC Code:		13 SIC Code:	
05 City:	06 State:	14 City:	15 State:
07 Zip Code:		16 Zip Code:	
08 Years Of Operation			
09 Name Of Owner During This Period			

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UDERR FILES
02
03
04
05

II. ON SITE GENERATOR

01 Name	02 D&B Number
NOT APPLICABLE	
03 Street Address (P.O.B. or RFD#)	
04 SIC Code:	
05 City:	06 State:
07 Zip Code:	

III. OFF-SITE GENERATOR(S)

01 Name	02 D&B Number	08 Name	09 D&B Number
NOT APPLICABLE			
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

IV. TRANSPORTER(S)

01 Name	02 D&B Number	08 Name	09 D&B Number
NOT APPLICABLE			
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	
01 Name	02 D&B Number	08 Name	09 D&B Number
03 Street Address (P.O.B. or RFD#)		10 Street Address (P.O.B. or RFD#)	
04 SIC Code:		11 SIC Code:	
05 City:	06 State:	12 City:	13 State:
07 Zip Code:		14 Zip Code:	

IV. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UDERR FILES
02
03
04
05

II. PAST RESPONSE ACTIVITIES

A. 01 Water Supply Closed 02 Date __/__/__ 03 Agency:
04 Description:
N/A

B. 01 Temporary H2O Supply Provided 02 Date __/__/__ 03 Agency:
04 Desciption:
N/A

C. 01 Permanent H2O Supply Provided 02 Date __/__/__ 03 Agency:
04 Description:
N/A

D. 01 Spilled Material Removed 02 Date __/__/__ 03 Agency:
04 Desciption:
N/A

E. 01 Contaminated Soil Removed 02 Date __/__/__ 03 Agency:
04 Description:
N/A

F. 01 Waste Repackaged 02 Date __/__/__ 03 Agency:
04 Desciption:
N/A

G. 01 Waste Disposed Elsewhere 02 Date __/__/__ 03 Agency:
04 Description:
N/A

H. 01 On Site Burial 02 Date __/__/__ 03 Agency:
04 Desciption:
N/A

I. 01 In Situ Chemical Treatment 02 Date __/__/__ 03 Agency:
04 Desciption:
N/A

J. 01 In Situ Biological Treatment 02 Date __/__/__ 03 Agency:
04 Description:
N/A

K. 01 Encapsulation 02 Date __/__/__ 03 Agency:
04 Desciption:
N/A

II. PAST RESPONSE ACTIVITIES (Continued)

L. 01 Emergency Waste Treatment 02 Date / / 03 Agency:
04 Description:
N/A

M. 01 Cutoff Walls 02 Date / / 03 Agency:
04 Desciption:
N/A

N. 01 Emergency Diking/Surface Water Diversion 02 Date / / 03 Agency:
04 Description:
N/A

O. 01 Cutoff Trenches/Sump 02 Date / / 03 Agency:
04 Desciption:
N/A

P. 01 Subsurface Cutoff Wall 02 Date / / 03 Agency:
04 Description:
N/A

Q. 01 Barrier Walls Constructed 02 Date / / 03 Agency:
04 Desciption:
N/A

R. 01 Capping/Covering 02 Date / / 03 Agency:
04 Description:
THE SPILL AREA HAS BEEN CAPPED WITH ASPHALT.

S. 01 Bulk Tankage Repaired 02 Date / / 03 Agency:
04 Desciption:
N/A

T. 01 Grout Curtain Constructed 02 Date / / 03 Agency:
04 Desciption:
N/A

U. 01 Bottom Sealed 02 Date / / 03 Agency:
04 Description:
N/A

V. 01 Gas Control 02 Date / / 03 Agency:
04 Desciption:
N/A

II. PAST RESPONSE ACTIVITIES (Continued)

W. 01 Fire Control 02 Date / / 03 Agency:
04 Description:
N/A

X. 01 Leachate Treatment 02 Date / / 03 Agency:
04 Desciption:
N/A

Y. 01 Area Evacuated 02 Date / / 03 Agency:
04 Description:

Z. 01 Access To Site Restricted 02 Date / / 03 Agency:
04 Desciption:
N/A

1. 01 Population Relocated 02 Date / / 03 Agency:
04 Description:
N/A

2. 01 Other Remedial Activities 02 Date / / 03 Agency:
04 Desciption:
N/A

III. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01
02
03
04
05

II. ENFORCEMENT INFORMATION

01 Past Regulatory/Enforcement Action Yes X No

02 Description Of Federal, State, Local Regulatoy/Enforcement Action:

III. SOURCES OF INFORMATION (Cite Specific References, e.g., state files, sample analysis, reports)

01 UDERR FILES
02
03
04
05

EARTHFAX ENGINEERING, INC.
7324 So. Union Park Avenue
Suite 100
Midvale, Utah 84047

Phone: (801) 561-1555
Fax: (801) 561-1861

FROM: Brent Bowen
TO: Jay Hetzel
COMPANY: URS
FAX NUMBER: 303-296-6117
DATE: 9/8/93 TIME: 5:30 PM
NUMBER OF PAGES: (including this page) 7

Jay: Please find enclosed copy of analytical results for water sample collected from Monitor Well 5 (MW-5). This is the only analytical results which we have been able to put our hands on. The State or EPA may have some additional data if Signetics submitted some. MW-5 is the well which Earthfax supervised the installation of. Another consultant (the identity of whom we don't know) supervised sampling of soils near the underground acid and solvent lines — which may have generated some waste.

Brent

URS Project No. 41891
Log No. 30 10 131517
☐ Original ☐ Copy

EPA CLOSEOUT COPY

EARTHFAX ENGINEERING INC.
7324 SOUTH 1300 EAST
Midvale, Utah 84047

CHAIN-OF-CUSTODY FORM

Sampling Company: EarthFax Engineering	Sampling Personnel: GG
Project Name: SIGNETICS	Project Number: 45-246-02
Analytical Laboratory: Chemtech	Date of Shipment/Delivery: 11-3-92
Method of Shipment/Delivery: HAND	Airbill Number:

Field Sample No.	Date Sampled	Time Sampled	Sample Type	No. of Containers	Remarks
MW-5	11-3-92	1400	WATER	6	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	11-3-92	1615	[signature]	11/3	4:15
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

EARTHFAX ENGINEERING, INC.
7324 South 1300 East
Midvale, Utah 84047

WATER SAMPLE ANALYSIS REQUEST FORM

Sampling Company: EarthFax Engineering, Inc.	Sampling Personnel: GG
Project Name: Signetics	Project Number: UC-266-02
Field Sample Number: MW-5	Time Sampled: 1400
Date Sampled: 11-3-92	Laboratory Sample Number:
Analytical Laboratory: Chemtech	Date of Shipment/Delivery: 11-3-92

Container Type	Number of Bottles	Preservative(s)	Analyses Requested
40 ml	3	4°C	8240 / F solvents
Amber	1		including cresols & ethoxyethanol
Plastic Pint	1		Metals - Arsenic, Barium, Cadmium,
Plastic	1		chromium, lead, Mercury, Selenium,
			silver
			Major Ions - calcium, Magnesium,
			sodium, Potassium, Bicarbonate,
			carbonate, chloride, Sulfate.

Special Requirements:

CHEMTECH
ANALYTICAL LABORATORY
6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 11-25-92

TO: EarthFax Engineering
7324 So. 1300 E. STE 100
Midvale, Utah 84047

SAMPLE ID: Lab #U087743 - Signetics, MW-5, 11-03-92
DATE SUBMITTED: 11-03-92

CERTIFICATE OF ANALYSIS

PARAMETER	DETECTED
Cresols, mg/l	<.005
2-ethoxyethanol, mg/l	<10
Alkalinity as $CaCO_3$, mg/l	243
Bicarbonate as HCO_3, mg/l	296
Carbonate as CO_3, mg/l	0
Hydroxide as OH, mg/l	0
Chloride as Cl, mg/l	28.7
Sulfate as SO_4, mg/l	76.1
Arsenic as As, mg/l	<.01
Barium as Ba, mg/l	0.094
Cadmium as Cd, mg/l	<.01
Calcium as Ca, mg/l	112
Chromium as Cr, mg/l	<.01
Lead as Pb, mg/l	<.01
Magnesium as Mg, mg/l	21.1
Mercury as Hg, mg/l	<.0005
Potassium as K, mg/l	6.1
Selenium as Se, mg/l	<.01
Silver as Ag, mg/l	<.01
Sodium as Na, mg/l	19.5

Russell Ruckman
Russell Ruckman

CHEMTECH
ANALYTICAL LABORATORY
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TO: EarthFax Engineering
7324 So. 1300 E. STE 100
Midvale, Utah 84047

DATE: 11-25-92

SAMPLE ID: Lab #U087743 - Signetics, MW-5, 11-03-92
DATE SUBMITTED: 11-03-92

CERTIFICATE OF ANALYSIS

PURGEABLE F-SOLVENTS	DETECTED	MDL
Acetone, mg/l	<.1	0.1
Benzene, mg/l	<.002	0.002
n-Butyl alcohol, mg/l	<.1	0.1
Carbon Disulfide, mg/l	<.05	0.05
Carbon Tetrachloride, mg/l	<.002	0.002
Chlorobenzene, mg/l	<.002	0.002
Cyclohexanone, mg/l	<.1	0.1
1,2-Dichlorobenzene, mg/l	<.01	0.01
1,4-Dioxane, mg/l	<.1	0.1
Ethyl acetate, mg/l	<.02	0.02
Ethyl benzene, mg/l	<.002	0.002
Ethyl ether, mg/l	<.02	0.02
Isobutanol, mg/l	<.1	0.1
Methylene chloride, mg/l	<.01	0.01
Methyl ethyl ketone, mg/l	<.05	0.05
Methyl isobutyl ketone, mg/l	<.05	0.05
Nitrobenzene, mg/l	<.1	0.1
2-Nitropropane, mg/l	<.05	0.05
Pyridine, mg/l	<.1	0.1
Tetrachloroethene, mg/l	<.005	0.005
Toluene, mg/l	<.01	0.01
1,1,1-Trichloroethane, mg/l	<.005	0.005
1,1,2-Trichloroethane, mg/l	<.005	0.005
1,1,2-Trichlorotrifluoroethane, mg/l	<.05	0.05
Trichloroethene, mg/l	0.0043	0.002
Trichlorofluoromethane, mg/l	<.01	0.01
Xylenes, mg/l	<.005	0.005

MDL = Minimum Detectable Level

Russell Ruckman
Russell Ruckman

CHEMTECH
ANALYTICAL LABORATORY
6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

SAMPLE ID: Lab #U087743 - Signetics, MW-5, 11-03-92
DATE SUBMITTED: 11-03-92

VOLATILE ORGANIC COMPOUNDS (EPA 8240)	DETECTED	MDL
Benzene, mg/l	<.002	0.002
Bromobenzene, mg/l	<.005	0.005
Bromochloromethane, mg/l	<.005	0.005
Bromodichloromethane, mg/l	<.005	0.005
Bromoform, mg/l	<.005	0.005
Bromomethane, mg/l	<.02	0.02
n-Butylbenzene, mg/l	<.01	0.01
sec-Butylbenzene, mg/l	<.01	0.01
tert-Butylbenzene, mg/l	<.01	0.01
Carbon tetrachloride, mg/l	<.002	0.002
Chlorobenzene, mg/l	<.002	0.002
Chloroethane, mg/l	<.005	0.005
Chloroform, mg/l	<.005	0.005
Chloromethane, mg/l	<.02	0.02
2-Chlorotoluene, mg/l	<.01	0.01
4-Chlorotoluene, mg/l	<.01	0.01
1,2-Dibromo-3-chloropropane, mg/l	<.010	0.010
1,2-Dibromoethane, mg/l	<.005	0.005
Dibromochloromethane, mg/l	<.005	0.005
Dibromomethane, mg/l	<.005	0.005
1,2-Dichlorobenzene, mg/l	<.01	0.01
1,3-Dichlorobenzene, mg/l	<.01	0.01
1,4-Dichlorobenzene, mg/l	<.01	0.01
Dichlorodifluoromethane, mg/l	<.05	0.05
1,1-Dichloroethane, mg/l	<.01	0.01
1,2-Dichloroethane, mg/l	<.005	0.005
cis-1,2-Dichloroethene, mg/l	<.005	0.005
trans-1,2-Dichloroethene, mg/l	<.002	0.002
1,2-Dichloropropane, mg/l	<.005	0.005
1,3-Dichloropropane, mg/l	<.005	0.005
2,2-Dichloropropane, mg/l	<.005	0.005
1,1-Dichloropropene, mg/l	<.005	0.005
cis-1,3-Dichloropropene, mg/l	<.005	0.005
trans-1,3-Dichloropropene, mg/l	<.005	0.005
Ethylbenzene, mg/l	<.005	0.005

MDL = Minimum Detectable Level

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Russell Ruckman

CHEMTECH
ANALYTICAL LABORATORY
6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

SAMPLE ID: Lab #U087743 - Signetics, MW-5, 11-03-92
DATE SUBMITTED: 11-03-92

VOLATILE ORGANIC COMPOUNDS (EPA 8240)	DETECTED	MDL
Hexachlorobutadiene, mg/l	<.01	0.01
Isopropyl benzene, mg/l	<.01	0.01
p-Isopropyltoluene, mg/l	<.01	0.01
Methylene chloride, mg/l	<.01	0.01
Naphthalene, mg/l	<.01	0.01
n-Propylbenzene, mg/l	<.01	0.01
Pyridine, mg/l	<.01	0.01
Styrene, mg/l	<.005	0.005
1,1,1,2-Tetrachloroethane, mg/l	<.005	0.005
1,1,2,2-Tetrachloroethane, mg/l	<.005	0.005
Tetrachloroethene, mg/l	<.005	0.005
Toluene, mg/l	<.01	0.01
1,2,3-Trichlorobenzene, mg/l	<.01	0.01
1,2,4-Trichlorobenzene, mg/l	<.01	0.01
1,1,1-Trichloroethane, mg/l	<.005	0.005
1,1,2-Trichloroethane, mg/l	<.005	0.005
Trichloroethene, mg/l	0.0043	0.002
Trichlorofluoromethane, mg/l	<.01	0.01
1,2,3-Trichloropropane, mg/l	<.01	0.01
1,2,4-Trimethylbenzene, mg/l	<.01	0.01
1,3,5-Trimethylbenzene, mg/l	<.01	0.01
Vinyl chloride, mg/l	<.01	0.01
Xylenes, mg/l	<.005	0.005

MDL = Minimum Detectable Level

Russell Ruckman
Russell Ruckman

Fax Cover Sheet

URS Consultants, Inc. · 1099 18th Street, Suite 700 · Denver · Colorado · 80202

Attention: JOE AKRIDGE / JOHN HART
TW Company
North SLC, Utah
FAX #(801) 299-1949

From: Andy Keim

Date: 2/10/94

Sender:

No. of Pages (including this page): 4

Job Number: 41891.30

If this transmittal is interrupted or is of poor quality, please call (303) 296-9700 and notify the sender of the document.

Message/Instructions:

Joe / John:

Attached are directions to the Signetics Site that I found in an old project file. I've also included copies of a couple of maps that may be useful. Give me a call if you have any questions.

-Andy

URS Project No. 41891
Log No. 30,10,B1526
☐ Original ☐ Copy

EPA CLOSEOUT COPY

9/13/93

REMOVAL OF INVESTIGATION DERIVED WASTE (IDW) FOR THE SIGNETICS CORPORATION SITE

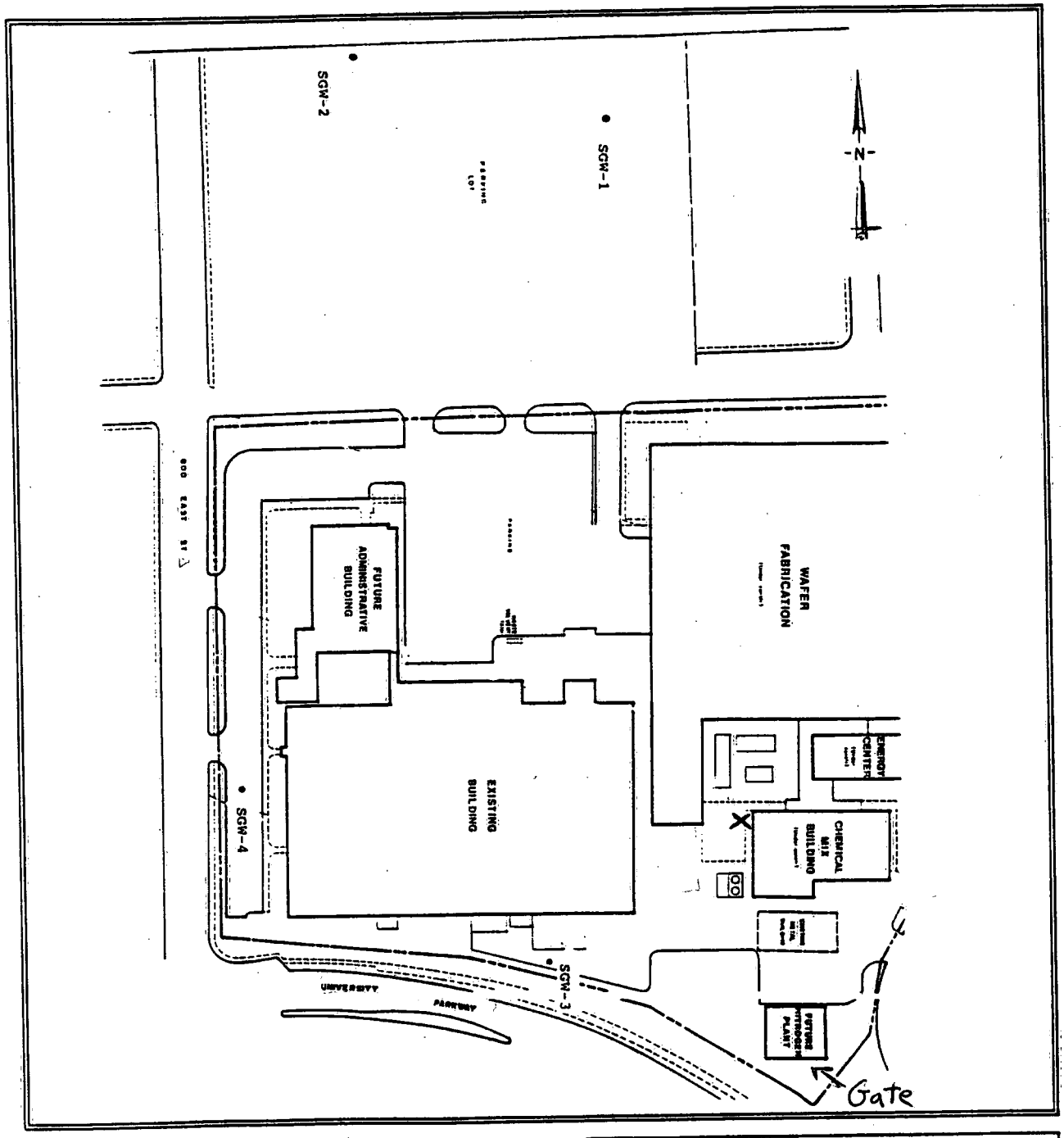
Directions to the Site

From Salt Lake City, take I-15 south to Orem. Exit at ~~1300~~ 1200 south (BYU exit), head east to 800 East. Turn north on 800 East, follow 800 East past the University Mall. The site is just east of the mall.

The site address is 1275 South 800 East. The site encompasses approximately 28 acres, and is bounded on the south by University Parkway, on the west by 800 East, and on the east by a small frontage road.

The guard at the site is Lee Keele. His telephone number at the site is (801) 226-8882. His mobile phone number is (801) 376-0090. He is on site from 7:00 am until 4:00 pm. (lunch 12-1)

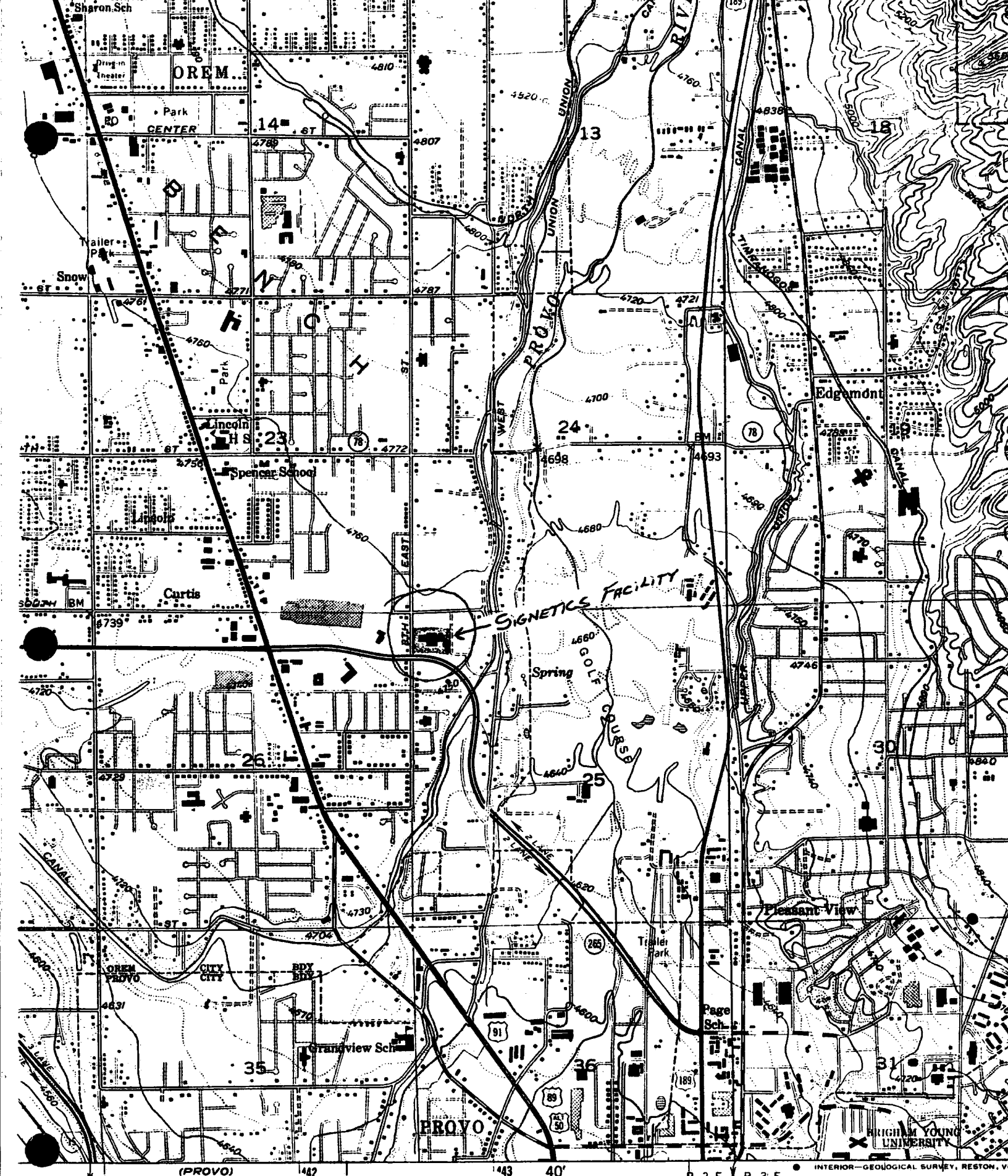
try his cell phone # first.



KEY

- Monitoring well

UTAH DEPARTMENT OF HEALTH		
BUREAU OF ENVIRONMENTAL RESPONSE AND REMEDIATION		
Sampling Locations Signetics Corporation Orem, Utah Figure 3		
By	Date	Scale
MJS	6/26/91	NTS



(PROVO) 3664 II NW

OVO) 1.4 MI.
FORK 14 MI.

PROVO (CIVIC CENTER) 1.5 MI.

PROVO (CIVIC CENTER) 1.1 MI

R 2 E. R 3 E

INTERIOR—GEOLOGICAL SURVEY, RESTON, V

SCALE 1:24 000

0 1 MILE

0 1000 2000 3000 4000 5000 6000 7000 FEET

.5 0 1 KILOMETER

RO

Heavy-duty

Medium-duty

MESSAGE CONFIRMATION

DATE:02/10/94 TIME:16:38

ID:URS CONSULTANT D

DATE	TIME	TX-TIME	DISTANT STATION ID	MODE	PAGES	RESULT
02/10	16:34	03'33"	8012991900	G3-S	004	OK

Signetics Corp. UTD 009667536
1275 S. 800 E. OREM, UTAH 84057 (801) 225-6600
40°16'26" N Lat 111°42'44" W Long

Site is NORTH of University Pkwy - East side of 800 East

RCRA 3001 received 11/19/80

EMCON sampling results - Shallow GW aquifer
Tetrachloroethane, Trichloroethylene, Toluene, Benzene, Ethylbenzene
111, Trichloroethane

Contacts

Michael Storck UDEQ DERR (801) ~~355-80~~ 536-~~4100~~ 4179
Luke Chavez (EPA)

8/11
3:30 phoned M. Storck - Left message - will call 8/12

8/12 phoned M. Storck @ 9AM - In field - Will call This AFT.

Phoned Information for Signetics Corp Phone # - as follows:
(801) 225-1916.
905 Phoned above number - got Credit Union Informed me
that Signetics no longer in Utah - moved to New Mexico.
908 Gave me Phone # (505) 822-7000.
Phoned above # - Left message.

8/19 Phone call w/Luke Chavez
(801) ~~226-1204~~ Sire Security
226-8882
Lee Keele (801) 376-0090 Mobile phone 1158 called Lee Keele, he will check on Drums & call back. # of drums, condition, labels, etc.

~~EPA Guidance~~

EPA CLOSEOUT COPY

COPY

STATE OF UTAH
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENVIRONMENTAL RESPONSE AND REMEDIATION
1950 West North Temple
Salt Lake City, UT 84116
(801) 536-4100

FAX NUMBER (801) 359-8853

FAX COVER SHEET

DATE: 7-23-92

TO: Luke Chavez

AGENCY/FIRM: EPA Region VIII

FAX NUMBER: 303-293-1238

FROM: Michael Storck / UDEQ / DERR

PAGES TO FOLLOW: 1

COMMENTS: Luke - Proposal from Signature Corp. to remove 33 drums from upgradient well drilled by E&E. Please give me a call so we can discuss.

Thanks,
Michael
801-536-4179

PHILIPS

047964

(505) 822-7000

Philips Semiconductors

July 20, 1992

Signetics Company
a subsidiary of North American Philips Corporation
1275 South 800 East Street
Orem, Utah 84058
(801) 225-6600

225-1916

Mr. Michael J. Storck
Department of Environmental Quality
Division of Emergency and Remedial Response
288 North 1460 West
Salt Lake City, Utah 84116

RE: Removal of State Drilling Materials From Signetics Property

Dear Michael,

Per our recent conversation, Signetics would like to make the following proposal for the removal of 33 drums of soil remaining from the 1991 State of Utah installation of a monitoring well on Signetics property.

All drums will be sampled for organic vapors using a Foxboro Model OVA-128 portable Flame Ionization Detector. No vapors were detected during drilling, so none are expected. Three drums will then be representatively sampled at random, using methodology recommended by 40 CFR 261, Appendix I (ASTM Standard 1452-65). Any drum in which organic vapors are detected will also be sampled. These samples will then be sent to Chem-Tech Laboratories in Salt Lake for TCLP analysis.

Provided the analysis does not indicate any problems, the drums will then be sent to USPCI's industrial (non-hazardous) waste landfill for disposal. Because of the expediency required by Signetics, Signetics will pay for this removal.

Please review this proposal and respond in writing as soon as possible, so that any problems may be resolved quickly. Signetics has announced the closure of this site by December 15, 1992, however, the property will be marketed for sale in August (1992), and it is Signetics strong desire to have these drums removed as quickly as possible.

If you have any questions, please contact me at 801-225-6600, ext. 4588. Your help with this matter is greatly appreciated.

Sincerely,

Jim Cochran

Jim Cochran
Environmental, Health and Safety Manager

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
JUL 21 1992
DIV. OF ENVIRONMENTAL RESPONSE AND REMEDIATION

USPCI
A Subsidiary of Union Pacific Corporation

CUSTOMER SERVICE
Grassy Mountain Facility
Fax: (801) 595-3994 Return Fax #
~~TELESCOPY TRANSMITTAL SHEET~~

To: Jay Hetzel
Fax #: 303-296-6117
Company: URS-Consultants
Date: 9.23.93

From: Chuck Lawrence

USPCI
Customer Service Representative

Number of sheets (including this one) 3

Comments: Please fill out Profile and Non Hazardous Waste Cert.

Sales Rep. mike Hull 531-4981 SLC

If fax is incomplete or illegible, please contact:
Chuck Lawrence at (801) 595-3997

P.O. Box 22750 • Salt Lake City, Utah 84122-9998 • 801/595-3900 • Fax 801/595-3990

126438

Waste Profile Sheet

P.O. number	Contract number	USPCI Sales Representative

I. Customer Information

Customer name	Technical contact
Loading site:	Phone / Fax
	General contact
Mailing address:	Phone / Fax
	Broker contact
Bill to:	Phone / Fax
	EPA ID number

II. Waste Generation Information

Waste name

Describe process producing waste (attach additional sheet if necessary)

Estimated quantity of waste

Is the waste generated from a... ☐ RCRA corrective action or a ☐ CERCLA site?

III. Waste Constituents, Characteristics and Properties

Physical state
☐ Solid Contains free liquids? ☐ yes ☐ no ☐ Liquid

pH range ☐ ≤ 2 ☐ 2-5 ☐ 5-8 ☐ 8-12 ☐ ≥ 12.5

Physical properties
☐ explosive ☐ fuming acids ☐ absorbents
☐ strong odor ☐ reactives Bulk density ____
☐ infectious ☐ asbestos Specific gravity ____
☐ PCB ☐ oxidizers Normality ____
☐ radioactives Color ____

Waste Composition	Range in %
Total must equal at least 100%	

Complete for Thermal Destruction

☐ Heat Value (BTU/lb) ____ to ____
☐ Water Content (%) ____ to ____
☐ Ash (%) ____ to ____
☐ Vapor Pressure (mmHG) ____ @ STP
☐ Viscosity ____ @ ____°F
☐ Total Bromine ____ to ____%
☐ Total Chlorine ____ to ____%
☐ Total Flouride ____ to ____%
☐ Total Iodine ____ to ____%
☐ Total Sulfer ____ to ____%

IV. EPA Waste Codes and Land Disposal Restriction Standards

Applicable EPA listed waste codes (F,K,U or P)

Contaminated... ☐ Soil ☐ Debris

Land Disposal Restriction standards: (check one)
☐ does not meet any applicable standards ☐ thallium > 130 mg/l ☐ meets standards for ____ and
☐ treated to meet all applicable standards ☐ nickel > 134 mg/l exceeds standards for ____.
☐ meets all standards without treatment ☐ HOC > 1000 mg/l ☐ unknown by customer ☐ no treatment standards apply

Non Regulated Wastes
☐ Non Hazardous under RCRA or State Regulations ☐ Conditionally Exempt Small Quantity Generator ☐ 100-1000 kg/mo generator

V. D-Code Characteristic Waste

	Actual Range			Actual Range
☐ D001 Ignitable (f.p.<140° F)		☐ D012 Endrin	≥0.02 mg/l	
☐ High TOC (>10%) NWW		☐ D013 Lindane	≥0.4 mg/l	
☐ Low TOC (<10%) NWW		☐ D014 Methoxychlor	≥10.0 mg/l	

IV. EPA Waste Codes and Land Disposal Restriction Standards

Applicable EPA listed waste codes (F,K,U or P)

Contaminated... ☐ Soil ☐ Debris

Land Disposal Restriction standards: (check one)

☐ does not meet any applicable standards ☐ thallium > 130 mg/l ☐ meets standards for _____ and
☐ treated to meet all applicable standards ☐ nickel > 134 mg/l exceeds standards for _____
☐ meets all standards without treatment ☐ HOC > 1000 mg/l ☐ unknown by customer ☐ no treatment standards apply

Non Regulated Waste:

☐ Non Hazardous under RCRA or State Regulations ☐ Conditionally Exempt Small Quantity Generator ☐ 100–1000 kg/mo generator

V. D-Code Characteristic Waste

			Actual Range
☐ D001	Ignitable (f.p.<140° F)		
	☐ High TOC (>10%) NWW		
	☐ Low TOC (<10%) NWW		
	☐ Ignitable liquids		
	☐ Ignitable reactives		
	☐ Oxidizers		
☐ D002	Corrosive (pH≤2 or ≥12.5)		
	☐ Acid liquids		
	☐ Alkaline liquids		
	☐ Other corrosive liquids		
☐ D003	Reactive		
	☐ Reactive sulfides		
	☐ Explosives		
	☐ Water reactives		
	☐ Reactive cyanides		
	☐ Other reactives		
☐ D004	Arsenic	≥5.0 mg/l	
☐ D005	Barium	≥100.0 mg/l	
☐ D006	Cadmium	≥1.0 mg/l	
	☐ Cadmium batteries		
☐ D007	Chromium	≥5.0 mg/l	
☐ D008	Lead	≥5.0 mg/l	
	☐ Lead acid batteries		
☐ D009	Mercury	≥0.2 mg/l	
	☐ High mercury (>260 mg/kg)		
	☐ (organics)		
	☐ High mercury (>260 mg/kg)		
	☐ (inorganics)		
	☐ Incin. residues		
	☐ Low mercury (<260 mg/kg)		
☐ D010	Selenium	≥1.0 mg/l	
☐ D011	Silver	≥5.0 mg/l	

			Actual Range
☐ D012	Endrin	≥0.02 mg/l	
☐ D013	Lindane	≥0.4 mg/l	
☐ D014	Methoxychlor	≥10.0 mg/l	
☐ D015	Toxaphene	≥0.5 mg/l	
☐ D016	2,4-D	≥10.0 mg/l	
☐ D017	2,4,5-TP Silvex	≥1.0 mg/l	
☐ D018	Benzene	≥0.5 mg/l	
☐ D019	Carbon tetrachloride	≥0.5 mg/l	
☐ D020	Chlordane	≥0.03 mg/l	
☐ D021	Chlorobenzene	≥100.0 mg/l	
☐ D022	Chloroform	≥6.0 mg/l	
☐ D023	O-Cresol	≥200.0 mg/l	
☐ D024	m-Cresol	≥200.0 mg/l	
☐ D025	p-Cresol	≥200.0 mg/l	
☐ D026	Cresol	≥200.0 mg/l	
☐ D027	1,4-Dichlorobenzene	≥7.5 mg/l	
☐ D028	1,2-Dichloroethane	≥0.5 mg/l	
☐ D029	1,1-Dichloroethylene	≥0.7 mg/l	
☐ D030	2,4-Dinitrotoluene	≥0.13 mg/l	
☐ D031	Heptachlor (and its epoxide)	≥0.008 mg/l	
☐ D032	Hexachlorobenzene	≥0.13 mg/l	
☐ D033	Hexachloro-1,3-butadiene	≥0.5 mg/l	
☐ D034	Hexachloroethane	≥3.0 mg/l	
☐ D035	Methyl ethyl ketone	≥200.0 mg/l	
☐ D036	Nitrobenzene	≥2.0 mg/l	
☐ D037	Pentachlorophenol	≥100.0 mg/l	
☐ D038	Pyridine	≥5.0 mg/l	
☐ D039	Tetrachloroethylene	≥0.7 mg/l	
☐ D040	Trichloroethylene	≥0.5 mg/l	
☐ D041	2,4,5-Trichlorophenol	≥400.0 mg/l	
☐ D042	2,4,6-Trichlorophenol	≥2.0 mg/l	
☐ D043	Vinyl chloride	≥0.2 mg/l	

VI. Shipping Information

Proper DOT Shipping Name (per 49 CFR 172.101)

Reportable quantity

DOT hazard class | UN/NA number

Method of shipment

☐ bulk solids ☐ bulk liquids ☐ 55-gallon drum ☐ lab pack ☐ other (specify) _____

Special handling or safety information (attach additional sheet if necessary)

I certify that the information presented on this form is accurate, the Waste Stream has been correctly characterized according to 40 CFR 262.11, a Representative Sample (or lab pack inventory) of this Waste Stream has been provided to USPCI, and that I am authorized by the above listed company or agency to make this certification.

Signature | Printed name | Date

REV MAY 1991

FACILITY

A Subsidiary of Union Pacific Corporation

CERTIFICATE OF NON-RCRA HAZARDOUS WASTE

_____, here called "Generator" has contracted with United States Pollution Control, Inc., here called "Contractor" for transportation, storage, treatment and disposal of the solid waste described below and Generator herby certifies and warrants to Contractor that the solid waste to be disposed of is not "hazardous waste" as that term is defined in Title 42 United States Code 6903, because said waste stream meets the following conditions:

a) Said waste is exempt from regulation because it meets the provisions of Title 40 Code of Federal Regulations 261.4, and\or,

b) Said waste is not listed as a hazardous waste in Subpart D Title 40 Code of Federal Regulations Part 261 and said waste is not classified as a hazardous waste in Subpart C of Title 40 Code of Federal Regulations Part 261 as a result of actual testing or knowledge of the hazard characteristic of the waste in light of the material or processes used.

DESCRIPTION OF THE WASTE:

ORGIN OF THE WASTE:

TYPICAL ANALYSIS OF WASTE:

Compound	Concentration or Volume

BY (NAME)_____ TITLE_____

GENERATOR_____ DATE_____

P.O. Box 22750 • Salt Lake City, Utah 84122-9998 • 801/595-3900 • Fax 801/595-3990

approximate COSTS

85.00/Drum if non Haz Disposal ONLY 85 x 33 = 2,805.00

250. profile approval (1 time charge) 250.

2.50 - 2.75/mile Trans. COST = 160 miles x 2.75 = 440.00

3,495.00

Plus Analytical COSTS (America West Quote) 634.-

4129.-

America West — Salt Lake City Lab (State Certified)
463 W 3600 South (801) 263-8686

2 composites

Jerry Rose

URS
A PROFESSIONAL SERVICES ORGANIZATION

URS CONSULTANTS, INC.
1099 18TH STREET
SUITE 700
DENVER, COLORADO 80202-1907
TEL: (303) 296-9700
FAX: (303) 296-6117

SAN FRANCISCO
SEATTLE
DENVER
COLORADO SPRINGS
SACRAMENTO
PORTLAND
ANCHORAGE
SAN BERNARDINO
LONG BEACH
LAS VEGAS

NEW YORK
CLEVELAND
COLUMBUS
PARAMUS
AKRON
BUFFALO
NEW ORLEANS
ATLANTA
BOSTON
VIRGINIA BEACH
PITTSBURGH

October 06, 1995

Mr. Robert Heise
Work Assignment Manager
U. S. Environmental Protection Agency
Region VIII, Superfund Management Branch
999 18th Street
Suite 500
8HWM-WAM
Denver, Colorado 80202-2405

Subject: **ARCS VI, VII and VIII, Contract No. 68-W9-0053, WA# 22-8JZZ**
Transfer of Files for Signetics Corporation Site, Orem, Utah, Special Studies (SS)

Dear Mr. Heise:

Please find attached the working files for the Signetics Corporation Site, Orem, Utah, Special Studies (SS). A copy of the file index and inventory is also enclosed. The index is standardized for the work assignment and, therefore, there may not be documents in each category for each site.

Additional Project Administration information (i.e. internal memorandum, receipts, all drafts, audits, etc.) are excluded from this file close-out. These documents are located in the URS Project Administration files.

If you should have any questions concerning this close-out, please feel free to contact me at 296-9700.

Very truly yours,

URS CONSULTANTS, INC.

Timothy C. Joseph
Tim Joseph
Site Manager

Attachment

cc: Metha Leslie/URS/Denver w/inventory only
ARCS File/URS/Denver

EPA CLOSEOUT COPY
URS Project No. 41891
Log No. 30,20,B1529
☐ Original ☐ Copy

41891.30
PMO\CLOSEOUT\CORRESPD\SIGNETCS.SS:mjl

SPECIAL STUDIES INDEX

1) Site Historical Information

- reports, correspondence, press clippings, interviews, maps, schematics, permits, ownership records, waste characteristics, analytical data

2) Correspondence

3) Field Information

- log books, site access agreements, photographs and negatives, field sampling plan

4) Health and Safety

- site health and safety plan, MSDS

5) Procurement

- proposals, statement of work, technical evaluations

6) Interpretative or Final Reports

7) Target Information

- ground water users, surface water users, population data, wetlands maps, land use maps, wind roses

8) QA/QC

41891 30- 10 B1516 FROM: UTAH TO: PUBLIC SUBJ: SITE INFO FROM UTAH DEPT OF HEALTH FILES
DATE: 1991 -

41891 30- 10 B1517 FROM: EARTHFAX TO: URS SUBJ: ANALYTICAL RESULTS FOR MONITORING WELL
DATE: SEP 8, 1993 ENG

41891 30- 10 B1526 FROM: URS TO: TW SUBJ: SITE INFORMATION FROM VARIOUS SOURCES
DATE: 1991-1992

41891 30- 20 B1529 FROM: URS TO: EPA SUBJ: LETTER RE CLOSEOUT AND TRANSFER OF FILES
DATE: OCT 06, 1995

41891 30- 30 B1515 FROM: URS TO: URS SUBJ: LOGBOOK #226 (HETZEL & KEIM) PLUS 1 HANDWRITTEN PAGE
DATE: AUG 1993-

41891 30- 30 B1518 FROM: URS TO: ENVIROSAFE SUBJ: HAZ WASTE MANIFEST FOR ROLL-OFF CONTAINER
DATE: APRIL 13, 1994

41891 30- 30 B1527 FROM: URS TO: URS SUBJ: SITE PHOTOS OF DRUMS AND STORAGE
DATE: SEP 23, 1993
NOTES: 4 PHOTOS

41891 30- 30 B1558 FROM: URS TO: URS SUBJ: PHOTOS OF SAMPLING AND REMOVAL ACTIVITIES/SEE LOGBOOK PAGES 17, 21
DATE: MAR AND APRIL 1994 AND 29 FOR DESCRIPTIONS
NOTES: 38 PHOTOS

41891 30- 40 B1523 FROM: TW TO: URS SUBJ: DRAFT: SITE SAFETY AND HEALTH PLAN
DATE: FEB 14, 1994

41891 30- 50 B1520 FROM: URS TO: URS SUBJ: TECHNICAL EVALUATION FOR TECHNICAL PROPOSALS
DATE: JAN 1994-

41891 30- 50 B1525 FROM: URS TO: VARIOUS SUBJ: PURCHASE REQUEST AND RESPONSES TO REQUEST FOR PROPOSALS (RFP)
DATE: 1993-1994

41891 30- 50 B1528 FROM: URS TO: URS SUBJ: MODIFICATION TO ORIGINAL SUBCONTRACT WITH TW
DATE: MARCH 1994

41891 30- 60 B1519 FROM: URS TO: URS SUBJ: DRAFT AND FINAL: SOW FOR INVESTIGATION DERIVED WASTE (IDW) REMOVAL
DATE: 1993 - PLUS ITRS BY FODOR, MOES, CHINNOCK

41891 30- 60 B1521 FROM: URS/TW TO: TW/URS SUBJ: DRAFT AND FINAL:SAMPLING AND ANALYSIS PLAN PLUS REVIEW
DATE: FEB 1994-

41891 30- 60 B1522 FROM: URS/TW TO: TW/URS SUBJ: FINAL: MATERIALS HANDLING, TRANSPORT AND DISPOSAL PLAN, AND
DATE: APRIL 1994 NON-HAZARDOUS WASTE CERTIFICATION PLUS REVIEW

41891 30- 60 B1524 FROM: TW TO: URS SUBJ: FINAL: ENVIRONMENTAL RESPONSE AND REMEDIATION TRANSPORTATION
DATE: JAN 21, 1994

National® Brand

COMP BOOK®

#226

Andy Keim

& J. Hetzel IDW

41891.30

80 SHEETS • 10 x 7⅞ • WIDE • 43-460

0 73333 43460

DENNISON STATIONERY PRODUCTS CO.
FRAMINGHAM, MA 01701-0341 U.S.A.

URS
Project No. 41891
Log No. 30,30,B1515
☐ Original ☐ Copy

SITE

Signetics Corporation
1275 South 800 East
OREM, UTAH 84057

40°16'26" N Latitude
111°42'44" W Longitude

RCRA 3001 Received 11/19/80

000362

11 Aug 93 FI

100 Reviewed files for site at CERCLA LFI. EMCON sampling results indicated Tetrachloroethane, Trichloroethylene, Toluene, Benzene, Ethylbenzene and 1,1,1 Trichloroethane in the shallow Groundwater Aquifer.

Contacts:

Michael Stock - UDEQ, DERR
(801) 536-4179

330 Phoned M. Stock - left message
Phoned Lula Chavez, out for the week.

000004

12 Aug 93 TV

900 Phoned M. STORCK. He is in the field, and will call back this Aft.
Phoned Information for Signetics phone number (801)225-196.
Phoned above number, got credit Union - Informed that Signetics has moved to New Mexico, OF this Number: (505) 822-7000.
Phoned above number - Left message for Environmental Manager to Call m

230 M. STORCK Called - He says the FDW was removed from the Site Last year.

12 Aug 93

19 Aug 93 JH

830 Phoned Luke Chavez. He said the IDW is still on site. Originally, Signetics was going to remove the IDW and dispose of it. For some reason, they have not done so. Contacts at the site:

Lee Keele (801) 226-8882
(801) 376-0090 mobile phone.

1158 Phoned site — no answer. Phoned mobile spoke w/ Lee Keele. He said the drums are on site in a fenced area covered with a tarp, have been for about 1 year. I asked him to check them over when he gets back to the site for: Labels, drum condition & Number of drums.

330 Lee Keele called from site. He said the drums are not labled, are in good condition except for "a little rust at the bottoms". He also said that there are 29 drums on the site.

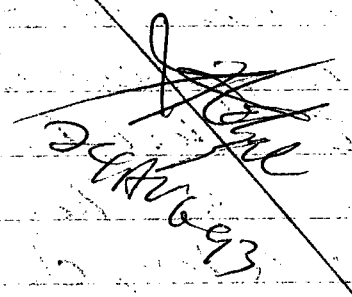
19 Aug 93

000006

24 AUG 93 JF

1435 Phoned APTUS (801) 973-9909, for IDW disposal. left message with Jim Jacob.

1440 Phoned Chemical Handling Corp. (801) 975-1800. spoke with Dale Clymens. He is mailing info on disposal.



000007

1 Sept 93 JH

Rechecked Signetics file at LAI. ESE, under TDD F08-9011-13 completed drilling a well May 20, 1991 By Boyles Brothers Drilling. Well designated as SI-MW-1A TD=108'

Legal descript of location = N 597.09', E 403.19' from the SW corner of Section 24, T6S, R2E, Salt Lake County, Utah.

Letter to Luke Chavez from Steve Yarbrough.

Obtained Copy of the Field Activities Report for Signetics Corporation UTD 000606-536.

Sept 93

000008

8 Sept 93 JH

840 Phoned Lee Keele at the Site, made arrangements with him to let Barry Blair (A[illegible]) and Tim Joseph (URS) on the site sometime Friday (9/10) morning to check over the IDW Drums, and photograph as necessary. Mr. Keele said that this is fine with him and he will be looking for them on Friday after 7AM.

1015 Call from Jim Jacob Westinghouse Environmental (APTUS). I asked about getting all required info pertaining to the IDW disposal. He will FAX: List of Analytes (parameters), Sampling methodology, Utah certified labs, costs associated with Transportation & Disposal (HAZ & NON-HAZ). Sales Dept: Art Kwerneland may be calling re follow-up.

[signature] 8 Sept 93

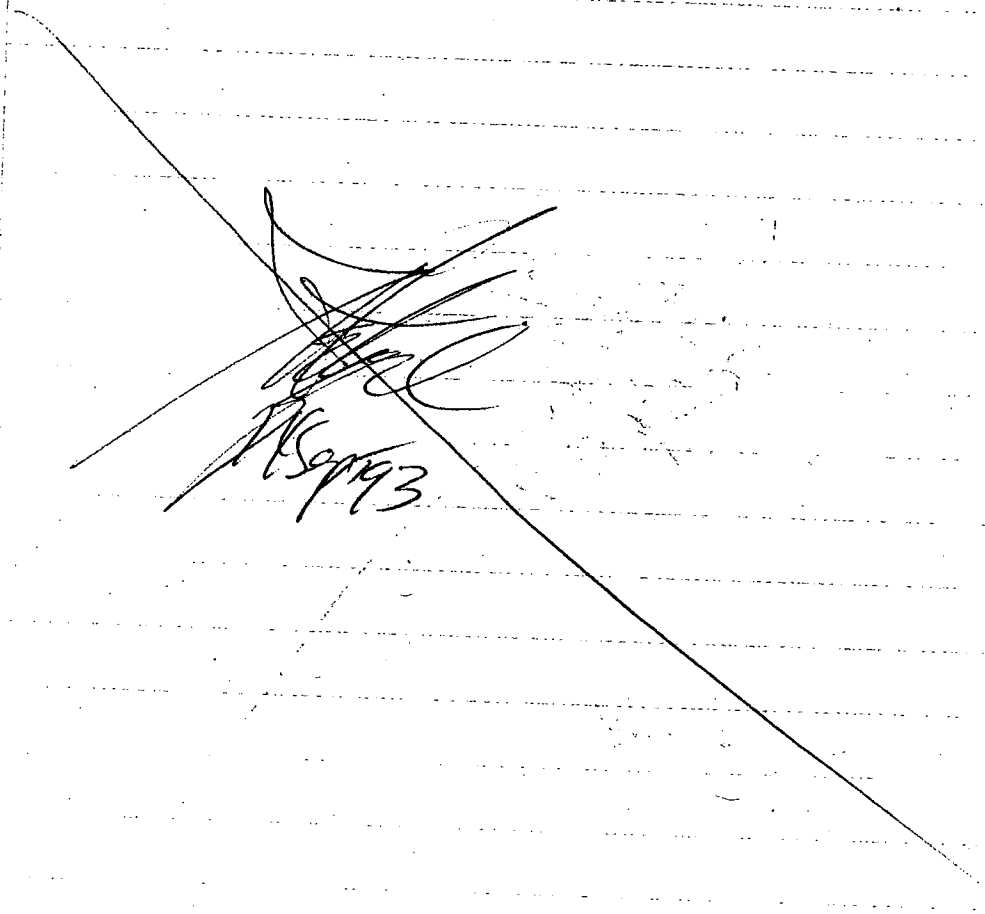
000009

14 Sept 93 TG

Houston #
1-800-
262-0173

1130 Phoned Jim Jacob (Westinghouse Envtl)
(801) 973-9909 for info on TDD disposal.
He never faxed me info on the SB. He
will FAX it this AFT. Ballpark price for
drum disposal is 95¢/pound or $300 per
drum minimum. Method of disposal for
this company is Incineration.

1515 Read FAX from ACT - Price Quote.



000010

20 Sept 93 TP

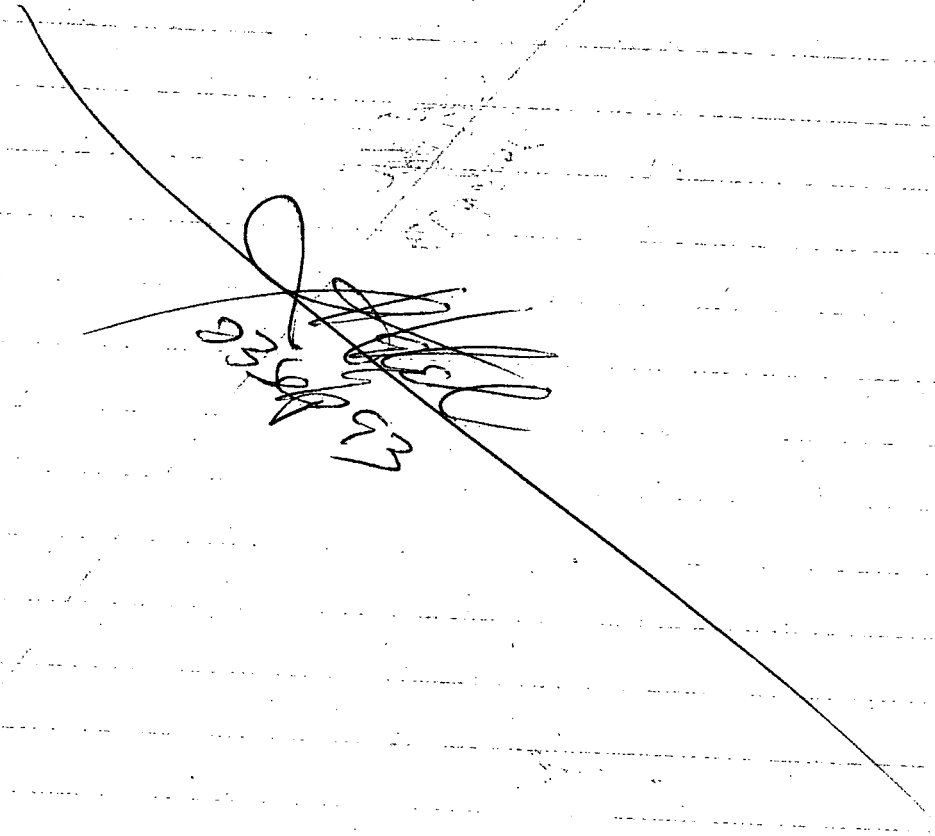
1040 Phoned Lee Keele at Signetics Site, made arrangements for site access to sample drums between 0900 - 1pm on Saturday, October 16, 1993. Mr Keele agreed that this would be a good time, although he usually works 7am - 4pm - Mon - Fri. I told Mr Keele I would call him if anything changes with this current plan.

20 Sep 93

23 Sep 93

Received pictures of Drums.

1015 Phoned Lee Cook. Asked him if he could separate the pallets, possibly 2 feet apart, before Oct. 16th. He said that he could do so. I told him this would be necessary for sampling the drums.



000012

24Sep93 TT

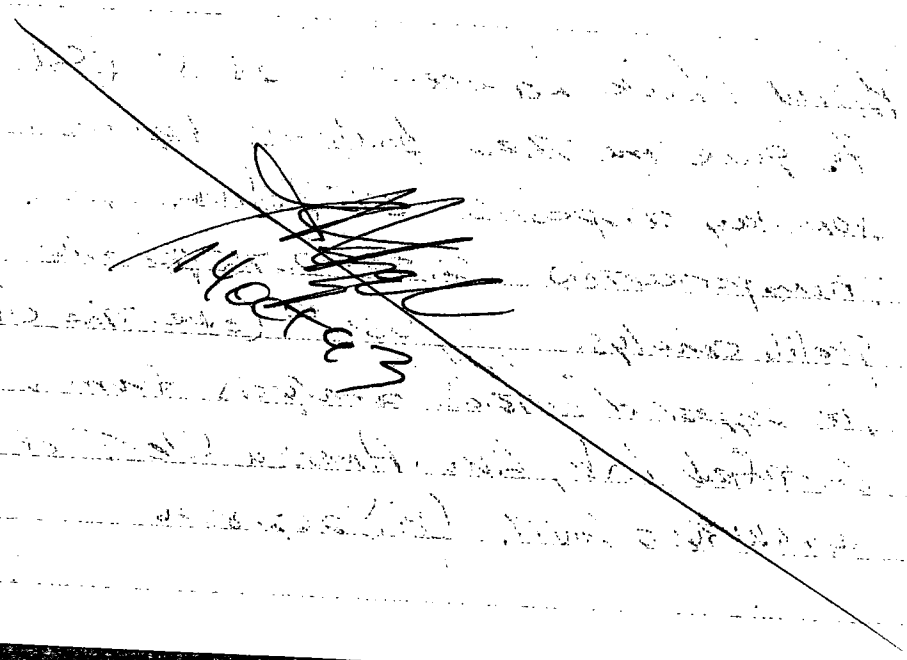
Directed by Barry Haghirst to turn over this file to Tim Joseph for completion of this assignment.

24Sep93

14OCT93 JH

000013

Obtained file from Tim Joseph. He was unable to work on this assignment because of extended field work, and backlog of other reports, as well as lack of info re: sample techniques. Cancelled sampling work that was to be conducted Oct. 16. Phoned Lee Keele to let him know we would not be there on the 16th, but plan to sample the drums within the next two to three weeks, and will let him know well in advance so that he will have time to separate the packs in order for us to sample them.



000014

19 OCT 93

Recieved phone call from Mike Cardillo of ACT. I asked him what analytical methods are required for profile, as follows:

Parameter	EPA method
Flashpoint	1020
pH	940
Water	ASTM 1744
BTU	ASTM D 24087
Halogens	325.3
Hydrocarbons	8010 & 8015
Total & TCLP Metals	6010
Mercury	7471
Spec. gravity	—
Visual	—
Odors	—

Phoned Chuck Laureano of USPCI for Quote. He gave me these ballpark figures:

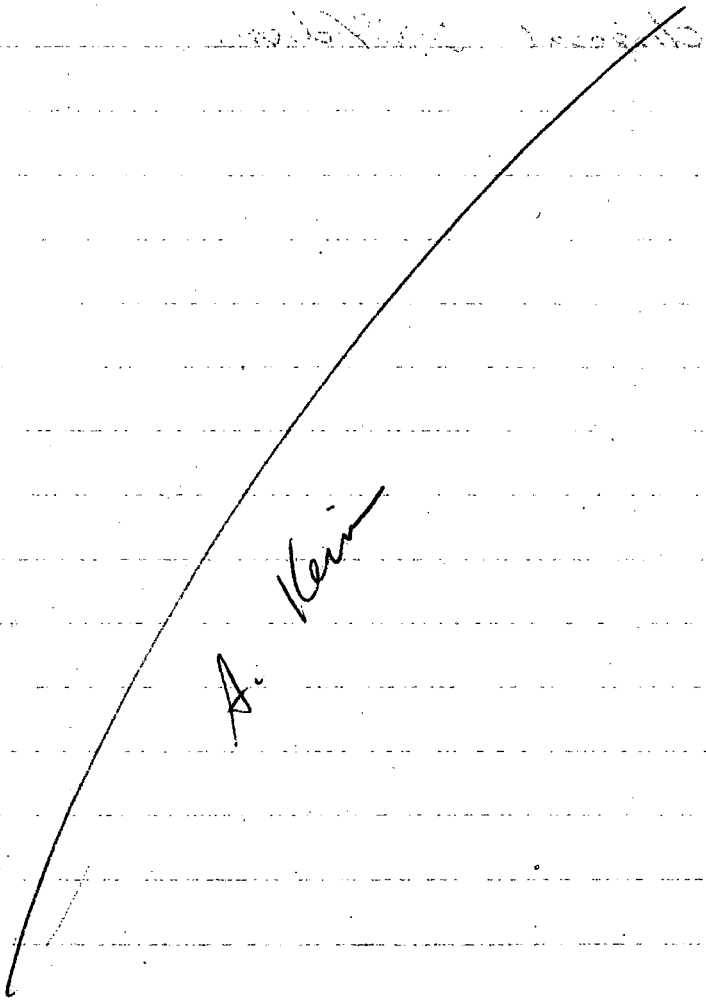
NON-Haz disposal 85.00/drum

Transportation 2.50-2.75 per mile

Profile analysis 250.00 (one-time charge)

He suggested outside analysis from a State Certified Lab, like America West of Salt Lake City 463 W 3600 South (801) 263-8686

Phoned Allen Peterson of Environsafe Services of Utah (801) 254-7532 or 1-800-727-9868 (pager)
He gave me the following ballpark figures:
Non-Haz disposal 50.00/drum


A. Klein

8900317

March 2, 1994 —A. Keim

Arrive @ Syntex Corp. Site @ 10:00
met: Lee Keele - site guard
Joe Akridge } TW Company
Joe Parkinson ~~[illegible]~~
Andy Keim - URS Consultants - Denver
Sunny; ~ 50°F; calm

— Drum Sampling for IDW Removal —

Photo 1 - opening drums for sampling

Joe Akridge says liquids present in some drums (4)
(3-4" liquid) [3 w/water, 1 w/oil (hydraulic fluid)]

Photo 2: Collecting sample from a drum

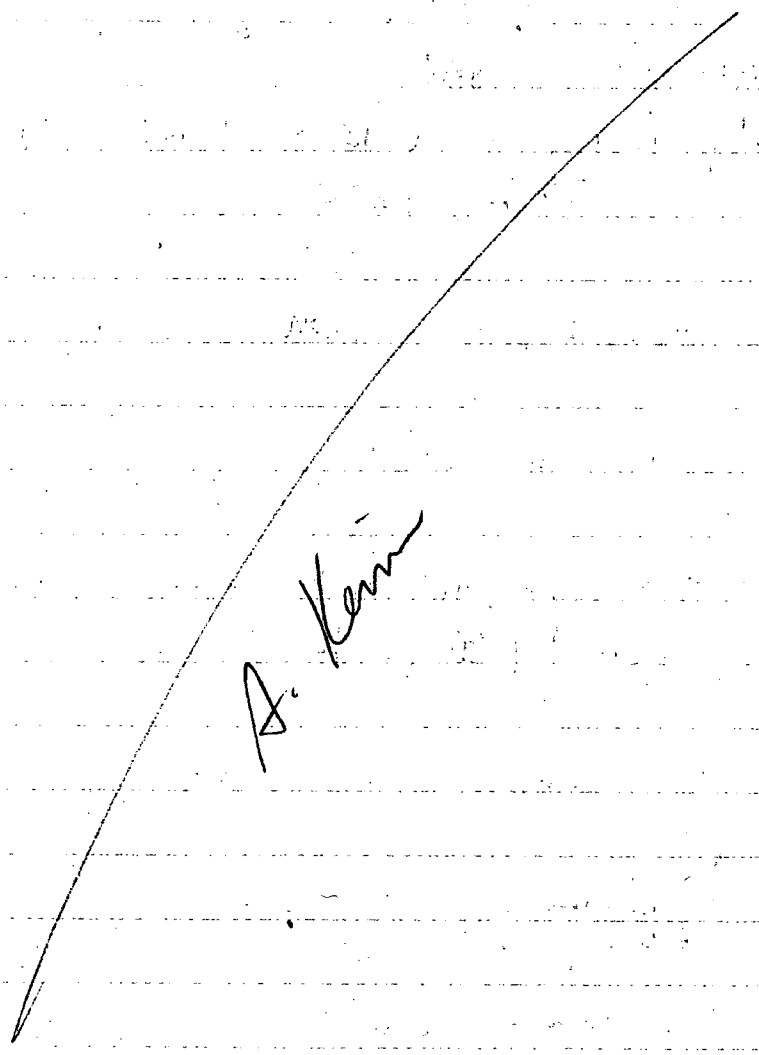
~~Sampled~~ Checked drum w/ LEL meter prior to sampling
& hole left afterwards

Hydraulic fluid from broken hose on drill rig in one drum (also contains plastic sheeting

Photo 3: Collecting sample w/ soil auger from drum,

Photo 4: Making composite sample in stainless steel mixing bowl

T900018



3/2/94

Photo 5: Taking LEL measurement in hole excavated in drum contents.

Photo 6: Putting sub samples in bucket for compositing

Photo 7: Removing sample from soil auger

Photo 8: Filling jar w/ composite sample for lab analysis

13 dry samples made 1ST composite

will be blended w/ other dry composite (11) in labs.

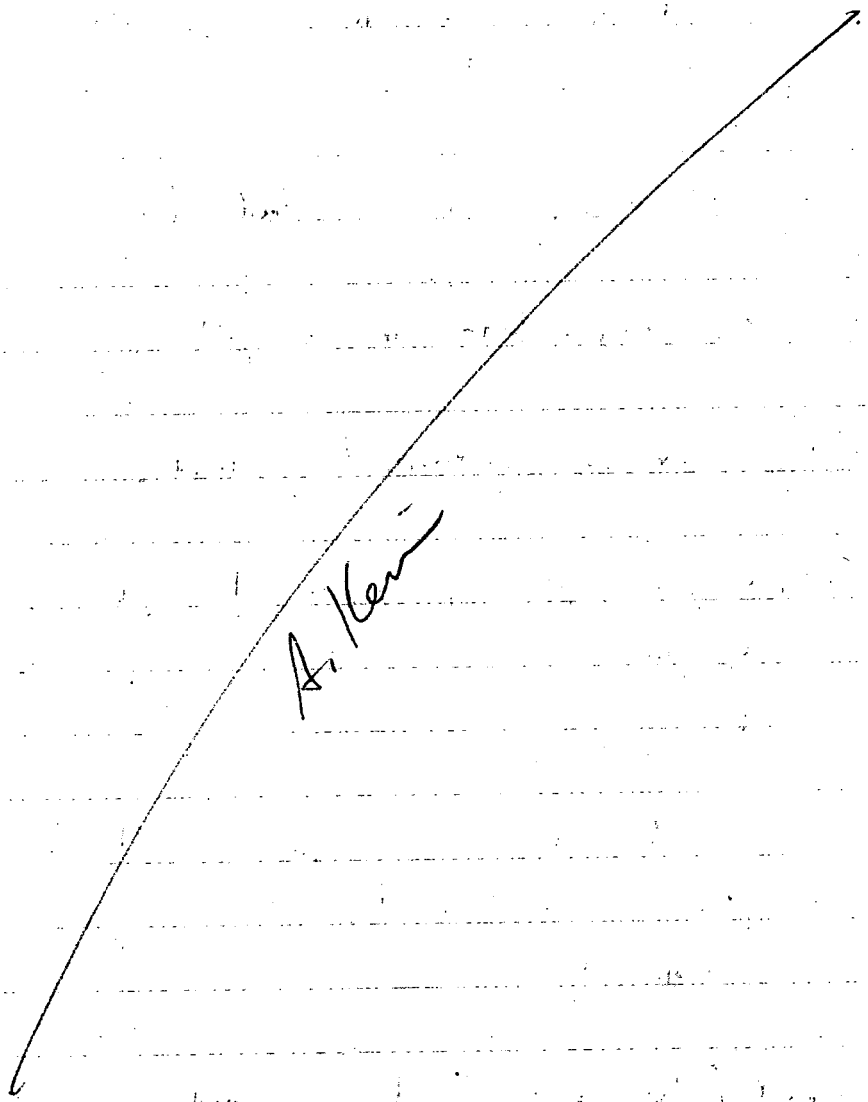
Will collect liquid sample & have lab mix & analyze to see if it can be solidified for disposal.

1335 Finished collecting all dry samples for second composite (to be mixed w/ first in lab). Will collect sample of liquids last in order to prevent cross contamination.

Photo 9 hole in drum

Photo 10 Corrosion on drum

000020



3/2/94

000021

TW Co will bring some overpack drums when removing drums in case drums w/ corrosion or ~~&~~ holes leak.

Photo11: Drum ~~of~~ containing several inches of liquid

Photo12: Collecting sample of saturated solids in drum containing liquid.

1400 Sunny, ~ 55°, breeze out of south
Put dry composite samples in cooler.

Photo13 Collecting solids sample from drum containing plaster, hydraulic fluid, & soil.

Photo14: Collecting a sample of liquids at top of drum

Photo 15: Sample bottles containing liquid from drums

1500 Finish collection of samples - re-seal drums & start decon.

Photo 16: Decon materials & liquid samples ~~Bottle from Monitor~~ 20-21st

Andrew M. Kerr 3/2/94

Andrew Klein

000023

3/7/94

Joe Alvidge (TW Co) called me and said he needed the generator ID # for the Signetics site. I called Bob Heise (EPA RPM) and asked for the number. He told me he would call me back.

3/8/94

I called Bob H. again he told me to call Larry Wayenski (EPA) @ 293-1509 for waste generator ID #. I called Larry & left message on voice mail.

3/9/94

Jill Mason (EPA) called me and said that Signetics already has a generator ID # since it's a large quantity generator. The # is CTD 009667536 and is specific to the site. Signetics is the generator, not EPA.
(Jill's Ph # 293-1706)

-A. Klein
3/9/94

3/9/94

0900 I called TW Co & left the generator ID# with the receptionist. Joe Akridge was not in the office.

4/11/94

I called Jill Musson (EPA) to get clarification on who needs to sign manifest as generator — she says ID# belongs to site → It really doesn't indicate who generator is. — URS should sign on behalf of EPA.

4/13/94

000027

1020 Arrive @ Syntex Site - 55°F; sunny, calm
met Lee Kale (guard)

Photo 1 - Emptying drum into rolloff container
Photo 2 - Emptying drum into rolloff container
3 - Drum crusher.
4 - Emptying drum into roll off container
5 - Crushed drum
6 - Banging dirt out of drum
7 - Absorbant material to be used to solidify liquids
8 - drum crusher in foreground; tipping drum into rolloff container in background
9 - Emptying drum into roll off container
10 - Material dumped into rolloff container; plastic sheeting lines container
11 - Transporting drum to container w/ fork lift.
12 - Emptying drum of soil into r.o. container
13 - IDW in r.o container (incl. crushed drums)

* end of roll #1 *

000028

000029

Photo 1 - removing lid from damaged drum
2 - Emptying drum containing liquid into r.o. container.
3. - Emptying drum into r.o. container
4. - Dumping crushed drum into r.o. container.
5. - Putting absorbant on top of soil.
Mis-shot-no
7. Putting (spreading) absorbent on top of load
8. Wrapping plastic over soil w/ absorbent spread on top.
9. Transport truck loading roll off container
10. Roll off container ready for loading (w/tarp attached)
11 Roll off container loaded onto truck

1130 Joe Akridge arrives at the site.

- absorbent = "Quick Sorb" (50 lb. bags)
- note: plastic sheeting under drum crusher.
- put absorbent on bottom of r.o. container prior to filling.

Brent Ashley
Dirk Jelitto } TW Co.
Gary Swanson

23460 lbs.

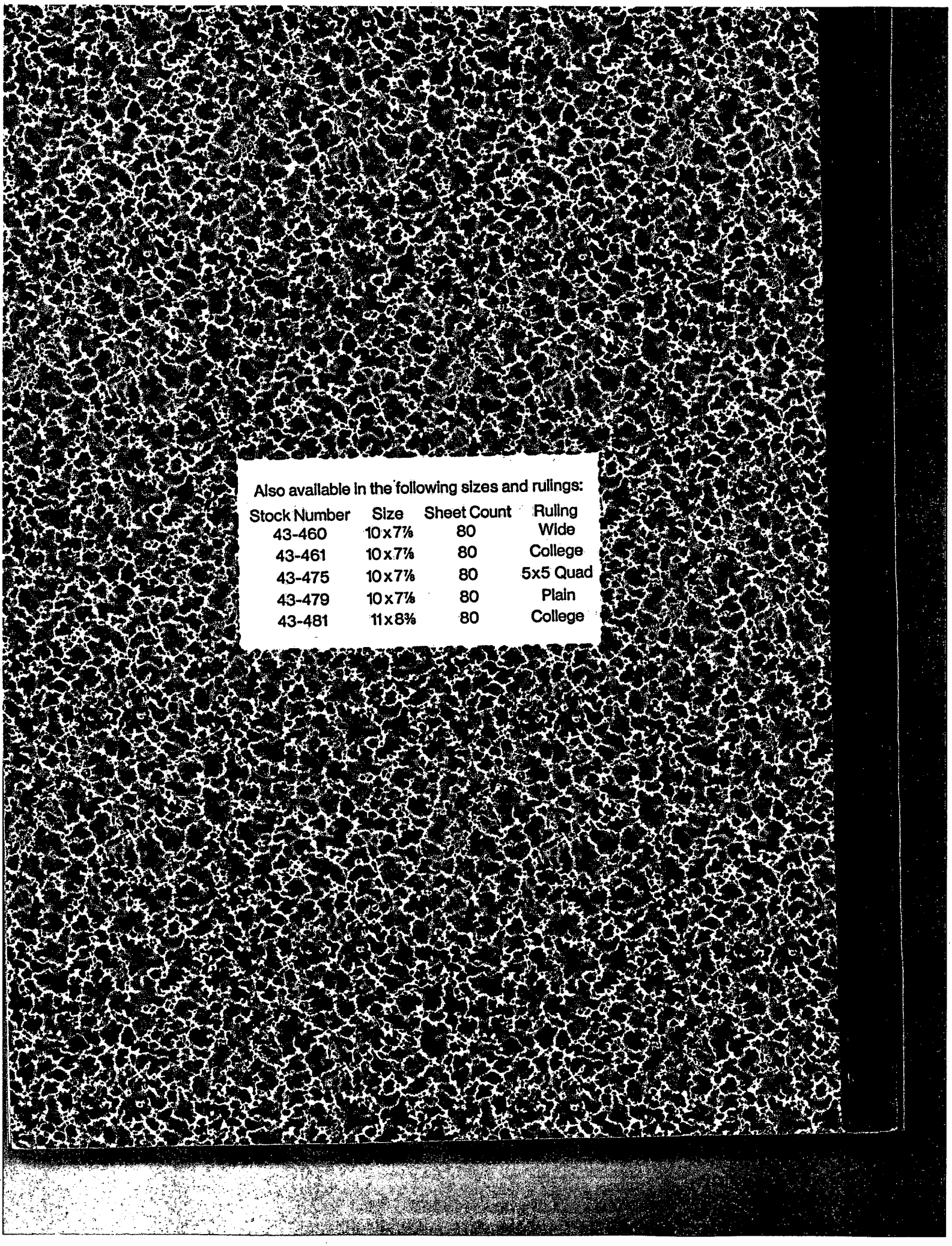
1350 Signed manifest "Andrew Keim for URS on behalf of USEPA"

000030

Note:

Rest of Comp Book
is Blank.

S. Lopez
Region 8
Regional Record
Center 7/25/14



Also available in the following sizes and rulings:

Stock Number	Size	Sheet Count	Ruling
43-460	10 x 7⅞	80	Wide
43-461	10 x 7⅞	80	College
43-475	10 x 7⅞	80	5x5 Quad
43-479	10 x 7⅞	80	Plain
43-481	11 x 8½	80	College

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
U.T.D.0.0.9.6.6.7.5.3.6	04139.41		

GENERATOR

3. Generator's Name and Mailing Address
SIGNETICS CORPORATION
1275 SOUTH 800 EAST
OREM, UTAH 84057

URS CONSULTANTS, INC. EPA CONTRACT # 68-W9-0053, PROJECT# 68-41891.30 SUBCONTRACT# DE94-Q-1611, IDW REM. Leo Keele

4. Generator's Phone (801) 376-0090

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name
TW COMPANY

6. US EPA ID Number
U.T.D.9.8.8.0.7.4.7.1.2

C. State Transporter's ID

D. Transporter's Phone ((801) 299-1900

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
ENVIROSAFE SERVICES OF IDAHO
10.5 MILES NORTHWEST OF GRAND VIEW ON HWY 78
GRAND VIEW, IDAHO 83624

10. US EPA ID Number
I.D.D.0.7.3.1.1.4.6.5.4

G. State Facility's ID

H. Facility's Phone
(208) 384-1500

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON RCRA NON HAZARDOUS WASTE SOLID 25 CUBIC YARD ROLL-OFF BOX CONTAINING MISC. NON HAZARDOUS DEBRIS IN SOLID FORM.		001	CM	23460	P.	N/A
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
A. ESII WSID# 15860001 ROLL-OFF CONTAINER CONTAINING: SOIL CLAY, PLASTIC, CRUSHED DRUMS, ROCKS, P.P.E., ETC.

K. Handling Codes for Wastes Listed Above

URS Project No. 41891
Log No. 30,30,B1518
☐ Original ☐ Copy

15. Special Handling Instructions and Additional Information ***HANDLE WITH CARE***
USE NIOSH & OSHA APPROVED EQUIPMENT WHILE HANDLING MATERIALS.
EMERGENCY CONTACT OR 24 HOUR RESPONSE, TW COMPANY (801) 299-1900
THIS MANIFEST IS USED FOR "CRADLE TO GRAVE" TRACKING OF WASTE.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. ***THIS WASTE IS NON RCRA NON HAZARDOUS***

Printed/Typed Name	Signature	Month	Day	Year
ANDREW KEIM/URS Consultants	A Keim for URS on behalf of US EPA	04	13	94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
TW Company		04	13	94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

7-BLS-C6
(Rev. 8/92)

COPY

UNIFORM HAZARDOUS WASTE MANIFEST AND INSTRUCTIONS EPA FORM 8700-22

U.S. EPA Form 8700-22

Read all instructions before completing this form.

This form has been designed for use on a 12-pitch (elite) typewriter; a firm point pen may also be used — press down hard.

Federal regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, and disposal facilities to use this form (8700-22) and, if necessary, the continuation sheet (Form 8700-22A) for both inter- and intrastate transportation.

Federal regulations also require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage and disposal facilities to complete the following information:

GENERATORS

Item 1. Generator's U.S. EPA ID Number — Manifest Document Number

Enter the generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this Manifest (e.g., 00001) by the generator.

Item 2. Page 1 of —

Enter the total number of pages used to complete this Manifest, i.e., the first page (EPA Form 8700-22) plus the number of Continuation Sheets (EPA Form 8700-22A), if any.

Item 3. Generator's Name and Mailing Address

Enter the name and mailing address of the generator. The address should be the location that will manage the returned Manifest forms.

Item 4. Generator's Phone Number

Enter a telephone number where an authorized agent of the generator may be reached in the event of an emergency.

Item 5. Transporter 1 Company Name

Enter the company name of the first transporter who will transport the waste.

Item 6. U.S. EPA ID Number

Enter the U.S. EPA twelve digit identification number of the first transporter identified in item 5.

Item 7. Transporter 2 Company Name

If applicable, enter the company name of the second transporter who will transport the waste. If more than two transporters are used to transport the waste, use a Continuation Sheet(s) (EPA Form 8700-22A) and list the transporters in the order they will be transporting the waste.

Item 8. U.S. EPA ID Number

If applicable, enter the U.S. EPA twelve digit identification number of the second transporter identified in item 7.

Note.—If more than two transporters are used, enter each additional transporter's company name and U.S. EPA twelve digit identification number in items 24-27 on the Continuation Sheet (EPA Form 8700-22A). Each Continuation Sheet has space to record two additional transporters. Every transporter used between the generator and the designated facility must be listed.

Item 9. Designated Facility Name and Site Address

Enter the company name and site address of the facility designated to receive the waste listed on this Manifest. The address must be the site address, which may differ from the company mailing address.

Item 10. U.S. EPA ID Number

Enter the U.S. EPA twelve digit identification number of the designated facility identified in item 9.

Item 11. U.S. DOT Description [Including Proper Shipping Name, Hazard Class, and ID Number (UN/NA)]

Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste as identified in 49 CFR 171 through 177.

Note.—If additional space is needed for waste descriptions, enter these additional descriptions in item 28 on the Continuation Sheet (EPA Form 8700-22A).

Item 12. Containers (No. and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

Table I — Types of Containers

DM = Metal drums, barrels, kegs	CY = Cylinders
DW = Wooden drums, barrels, kegs	CM = Metal boxes, cartons, cases (including roll-offs)
DF = Fiberboard or plastic drums, barrels, kegs	CW = Wooden boxes, cartons, cases
TP = Tanks portable	CF = Fiber or plastic boxes, cartons, cases
TT = Cargo tanks (tank trucks)	BA = Burlap, cloth, paper or plastic bags
TC = Tank cars	
DT = Dump truck	

Item 13. Total Quantity

Enter the total quantity of waste described on each line.

Item 14. Unit (Wt./Vol.)

Enter the appropriate abbreviation from Table II (below) for the unit of measure.

Table II — Units of Measure

G = Gallons (liquids only)	L = Liters (liquids only)
P = Pounds	K = Kilograms
T = Tons (2000 lbs)	M = Metric tons (1000 kg)
Y = Cubic yards	N = Cubic meters

Item 15. Special Handling Instructions and AdditionalInformation

Generators may use this space to indicate special transportation, treatment, storage, or disposal information or Bill of Lading information. States may not require additional, new, or different information in this space. For international shipments, generators must enter in this space the point of departure (City and State) for those shipments destined for treatment, storage, or disposal outside the jurisdiction of the United States.

Item 16. Generator's Certification

The generator must read, sign (by hand), and date the certification statement. If mode *other than* highway is used, the word "highway" should be lined out and appropriate mode (rail, water, or air) inserted in the space below. If another mode *in addition to* the highway mode is used, enter the appropriate additional mode (e.g., *and rail*) in the space below.

Primary exporters shipping hazardous wastes to a facility located outside of the United States must add to the end of the first sentence of the certification the following words "and conforms to the terms of the EPA Acknowledgment of Consent to the shipment."

In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements.

Generators may preprint the words "On behalf of" in the signature block or may hand write this statement on the signature block prior to signing the generator certifications.

Note.—All of the above information *except* the handwritten signature required in item 16 may be preprinted.

TRANSPORTERS

Item 17. Transporter 1 Acknowledgement of Receipt of Materials

Enter the name of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Item 18. Transporter 2 Acknowledgement of Receipt of Materials

Enter, if applicable, the name of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Note.—International Shipments — Transporter Responsibilities.

Exports—Transporters must sign and enter the date the waste left the United States in item 15 of Form 8700-22.

Imports—Shipments of hazardous waste regulated by RCRA and transported into the United States from another country must upon entry be accompanied by the U.S. EPA Uniform Hazardous Waste Manifest. Transporters who transport hazardous waste into the United States from another country are responsible for completing the Manifest (40 CFR 263.10(c)(1)).

OWNERS AND OPERATORS OF TREATMENT, STORAGE, OR DISPOSAL FACILITIES

Item 19. Discrepancy Indication Space

The authorized representative of the designated (or alternate) facility's owner or operator must note in this space any significant discrepancy between the waste described on the Manifest and the waste actually received at the facility.

Owners and operators of facilities located in unauthorized States (i.e., the U.S. EPA administers the hazardous waste management program) who cannot resolve significant discrepancies within 15 days of receiving the waste must submit to their Regional Administrator (see list below) a letter with a copy of the Manifest at issue describing the discrepancy and attempts to reconcile it (40 CFR 264.72 and 265.72).

Owners and operators of facilities located in authorized States (i.e., those States that have received authorization from the U.S. EPA to administer the hazardous waste program) should contact their State agency for information on State Discrepancy Report requirements.

EPA Regional Administrators

Regional Administrator, U.S. EPA Region I, J.F. Kennedy Fed. Bldg., Boston, MA 02203

Regional Administrator, U.S. EPA Region II, 26 Federal Plaza, New York, NY 10278

Regional Administrator, U.S. EPA Region III, 6th and Walnut Sts., Philadelphia, PA 19106

Regional Administrator, U.S. EPA Region IV, 345 Courtland St., NE., Atlanta, GA 30365

Regional Administrator, U.S. EPA Region V, 230 S. Dearborn St., Chicago, IL 60604

Regional Administrator, U.S. EPA Region VI, 1201 Elm Street, Dallas, TX 75270

Regional Administrator, U.S. EPA Region VII, 324 East 11th Street, Kansas City, MO 64106

Regional Administrator, U.S. EPA Region VIII, 1860 Lincoln Street, Denver, CO 80295

Regional Administrator, U.S. EPA Region IX, 215 Freemont Street, San Francisco, CA 94105

Regional Administrator, U.S. EPA Region X, 1200 Sixth Avenue, Seattle, WA 98101

Item 20. Facility Owner or Operator: Certification of Receipt of Hazardous Materials Covered by This Manifest Except as Noted in Item 19

Print or type the name of the person accepting the waste on behalf of the owner or operator of the facility. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Items A-K are not required by Federal regulations for intra- or interstate transportation. However, States may require generators and owners or operators of treatment, storage, or disposal facilities to complete some or all of items A-K as part of State manifest reporting requirements. Generators and owners and operators of treatment, storage, or disposal facilities are advised to contact State officials for guidance on completing the shaded areas of the Manifest.

Jay H

Allan Peterson (801) 254-7532 (800) 727-9969 (Pager)

MAILING ADDRESS:
P.O. Box 16217
Boise, Idaho 83715-6217
(208) 384-1500

GENERATOR WASTE PRODUCT QUESTIONNAIRE

ENVIROSAFE SERVICES OF IDAHO

FACILITY AND LAB SAMPLE ADDRESS
10½ Miles NW Grand View
Missile Base Road
Grand View, Idaho 83624

U.S. EPA ID. Number IDD078114654

NOTE: Before completing profile, please read instruction booklet. *Indicates typical problem areas.

SECTION A - GENERATOR DATA

Mailing address as it will appear on manifest

1a. **Generator** _____

Address _____

City/State _____ Zip _____

Tech. Contact _____ Tel. _____

1b. **Off-Spec Contact** _____ Tel. _____
(WHEN TRUCK ARRIVES AT ESII)

24 HR. 7 Day/Week Contact _____ Tel. _____

U.S. EPA IDENTIFICATION NUMBER

2. **Billing/Broker** _____

Address _____

City/State _____ Zip _____

Billing Contact _____ Tel. _____

Enviroseafe Service Only

Application # ☐☐☐☐☐☐

WS ID ☐☐☐☐☐☐☐☐

☐ Direct ☐ Billing Broker

Sales Zone Code ☐☐☐

SAFETY ☐ Yes ☐ No

Safety Code ☐☐☐☐☐☐

Cell 5/14 Waste ☐ P.O.A. ☐

MANIFEST NOTIFICATION/ CERTIFICATION REQUIRED ☐

Source Code A☐☐

System Type Code M☐☐

COMPLETENESS CHECK:

SECTION B - WASTE CHARACTERIZATION

1. **Common Name for This Waste:** _____ ☐*

*2. **Detailed Process Generating Waste:** (We recommend 25 words or more. If there is insufficient space, use Section H or attach process letter. See latest instruction booklet for details. Note that incomplete information here, or elsewhere on form, will delay approval process.)

_____

_____

_____

3. **Annual Quantity:** _____ 1☐ Tons 2☐ Yards 3☐ Gallons 4☐ Drums

4. **Shipment Duration**
1☐ Permanent (1 Year or Longer)
2☐ Temporary (Less Than 1 Year)

5. **Shipment Mode:**
1☐ Bulk 2☐ Palletized Boxes 3☐ Woven Cloth Bags 4☐ Metal Drums _____ (SIZE)
5☐ Buckets _____ (SIZE) 6☐ Overpacks _____ (SIZE) 7☐ Other _____

6. **Service Requested From ESII:** ☐ Direct Landfill Disposal ☐ Stabilization (One gallon sample sent with copy of questionnaire to facility address, original questionnaire sent to mailing address) ☐ Solidification Recontainerization ☐ Other _____ ☐ Unknown, please advise ☐ Transportation.
ESII will contact broker/generator if additional samples are required (see WPQ instructions for details).

7. **Application Type:** ☐ New ☐ Yearly renewal (only signed recent letter and sample (if required) and updated analysis is required if composition or process has not changed. Please do not send questionnaire if no changes have occured with respect to waste stream or process.) ☐

SECTION C - PHYSICAL PROPERTIES

1. **Describe physical state at 70°F**
1☐ Dry Solid 2☐ Damp Solid 3☐ Powder 4☐ Semi-Solid/Gel 5☐ Flowable Liquid 6☐ Labpack 7☐ House Hold Pack
8☐ Other _____

2. **Describe Lead Bearing Strength at 70°F:** **2.1 Penetrometer PSI:** ***2.2 % Solids @ 105°C:** **% Solids Range**
1☐ Solid/Rigid 2☐ Sludge 3☐ Weak/None _____ _____ _____ to _____ ☐*
*(2.2 is required for stabilization, value must be exclusive of debris, use standard methods 209A.)

*3. **Describe Physical Appearance of Waste**
(Include color, texture, be specific with complete range and variation. See instructions.)
_____
_____

4. **Apparent Density of Waste:**
(Required for Bulk)
_____ Lb./Cu. Yard ☐*

3/4/93

EPA CLOSEOUT COPY

ENVIROSAFE SERVICES OF IDAHO, INC.

Application # ☐☐☐☐☐☐

WSID ☐☐☐☐☐☐☐

5. **Flash Point:** 1☐<70°F 2☐70-100°F 3☐101-140°F 4☐141-200°F 5☐>200°F **5.1 Actual Flash Point:** _____°F (Required for liquids) ☐*

5.2 **Will material burn in a flame:** 1☐Yes 2☐No

5.3 **Maximum % of Lower Explosive Limit (LEL)** as measured in the headspace of the shipping container by a combustible gas detection calibrated with propane _____ ☐*

* 6. **pH Range** _____ to _____ *6.1 **Actual pH (S.U.):** _____

*(Please test for pH except for debris, ESII always tests pH when truck arrives. Solids are tested by first mixing with water one to one.)

7. **Describe Odor of Waste:** 1☐None 2☐Slight 3☐Strong **Describe** _____

8. **Viscosity (Liquids): Similar to:** 1☐Water 2☐Motor Oil 3☐Honey ☐Other _____

* 9. **Debris in Waste:** (indicate % in Sec. E by weight.) ☐Yes ☐No ☐Describe _____

10. **For Materials for Stabilization by ESII, is debris moisture absorptive** ☐Yes ☐No ☐Comments _____

11. **The following materials will be used for spill clean-ups while handling waste or product at generator's facility:**

_____

12. **Potential for presence/Separation of incidental liquids due to transport:** (Question is provided to eliminate delays for profile amendment should load arrive with free liquids.) ☐Yes ☐No

13. **Material is capable of liquefying or melting if exposed to temperatures between 32°F and 120°F:** ☐Yes ☐No

SECTION D - ANALYTICAL REPORT

As Shipped to ESII

1. ☒ **All values left blank are considered certified as not applicable.** (Note that D004 through D043 are only included for reference.)

2.1 **Values are from:** ☐Lab Report Analysis ☐Generator Knowledge ☐MSDS ☐Other _____

2.2 **Lab Report or MSDS is attached.** ☐Yes ☐No

3. **Analysis method is:** ☐TC-TCLP SW-846 1311 (mg/l) ☐Totals SW-846 (mg/kg)
☐Other _____ Units _____

PARAMETER	UNITS	PARAMETER	UNITS	PARAMETER	UNITS	PARAMETER	UNITS
Aluminum		Chlordane (D020)		Butanol		Orthodichlorobenzene	
Antimony		Heptachlor (D031)		Carbon Disulfide		Pentachlorophenol (D037)	
Arsenic (D004)		Total Cyanide		Carbon Tetrachloride (D019)		Pyridine (D038)	
Barium (D005)		Amenable Cyanide		Chlorobenzene		Tetrachloroethylene (D039)	
Beryllium		Reactive Cyanide (D003)		Cresols-Cresylic Acid (D023-26)		Toluene	
Cadmium (D006)		Free Cyanide		Cyclohexanone		1, 1, 1-Trichloroethane	
Chromium (hex) (D007)		Total Sulfide		1,2-Dichlorobenzene		1, 1, 2 - Trichloroethane	
Chromium (tot) (D007)		Free Sulfide		1,4 Dichlorobenzene (D027)		Trichlorotrifluoroethane	
Cobalt		Reactive Sulfide (D003)		1, 1 Dichloroethylene (D029)		Trichloroethylene (D040)	
Copper		Phenolics		2, 4 Dinitrotoluene (D030)		Trichlorofluoromethane	
Iron		Chloride		2 - Ethoxyethanol		Xylene(s)	
Lead (D008)		Fluoride		Ethyl Acetate			
Mercury (D009)		Phosphate		Ethyl Benzene			
Nickel +		Sulfate		Ethyl Ether			
Selenium (D010)		Nitrate-N		Hexachlorobenzene (D032)			
Silver (D011)		Ammonia-N		Hexachlorobutadiene (D033)			
Thallium +		Kjeldahl-N		Hexachloroethane (D034)			
Zinc		Oil & Grease		Isobutanol			
Endrin (D012)		TOC (Carbon)		Methanol			
Lindane (D013)		TOX (Halogen)		Methylene Chloride			
Methoxychlor (D014)		PCB		Methyl Ethyl Ketone (D035)			
Toxaphene (D015)		Dioxins		Methyl Isobutyl Ketone			
2, 4-D (D016)		Acetone		Nitrobenzene (D036)			
2, 4, 5-TP/Silvex (D017)		Benzene (D018)		2-Nitropropane			

Copies of all analyticals, lab reports and/or Material Safety Data Sheets **must be attached** to this application.

☐ Copies attached. ☐

ENVIROSAFE SERVICES OF IDAHO, INC.

Application # ☐☐☐☐☐☐

WSID ☐☐☐☐☐☐☐☐

SECTION E - WASTE COMPOSITION

As Shipped to ESII

1. List all components within the waste stream by percentage. Account for 100 percent of waste in the TYPICAL % column.

	Typical %	Range %
		to
		to
		to
		to
		to
		to
		to
		to
		to
*TOTAL	=100?	☐Yes ☐No

SECTION F - WASTE CLASSIFICATION

As Shipped to ESII

1. Choose one. Waste as shipped will be: ☐RCRA NON-HAZARDOUS ☐RCRA HAZARDOUS
2. RCRA EPA Waste Code(s) from 40 CFR 261:

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

3. Does Waste Exhibit or Contain the Following:

EXPLOSIVE	☐YES ☐NO	ETIOLOGICAL	☐YES ☐NO
SHOCK SENSITIVE	☐YES ☐NO	THERMALLY UNSTABLE	☐YES ☐NO
PYROPHORIC	☐YES ☐NO	RADIOACTIVE	☐YES ☐NO
WATER REACTIVE	☐YES ☐NO	TIRES	☐YES ☐NO

If YES, Explain in Section H

4. Is this waste, or the generating facility, subject to regulation under 40 CFR Part 61 Subpart FF (Benzene Rule) of NESHAPS (58 FR No. 4 – 1/7/93) (Note: Waste generated from chemical manufacturing, coke-by-product recovery plants, petroleum refineries or treaters of such waste are subject to these requirements). ☐YES ☐NO
5. SIC CODE ☐☐☐☐☐☐ FORM CODE B☐☐☐
6. State Waste Codes: State of _____

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐NOT APPLICABLE

SECTION G - U.S. DOT SHIPPING DESCRIPTION

(Note – Shipper is responsible for correctness of this information)

1. D.O.T. Hazardous Material? ☐Yes ☐No
2. D.O.T. RQ Required: ☐Yes ☐No ☐N/A
3. Proper D.O.T. Shipping Name: _____
4. D.O.T. Hazard Class: _____ 5. Packaging Group: _____
6. D.O.T. ID Number: _____
7. Additional D.O.T. Description: _____

ENVIROSAFE SERVICES OF IDAHO, INC.

Application # ☐☐☐☐☐☐

WSID ☐☐☐☐☐☐☐☐

SECTION H - ADDITIONAL COMMENTS

1. **Additional Comments, Descriptions, or Waste Stream Information:**

PROCESS DIAGRAM OR PHOTOGRAPH

SECTION J - CERTIFICATION

1. Is this waste the result of a product spill clean-up? ☐Yes ☐No
* 2. Has this waste been treated (per 40 CFR 260.10) after the initial point of generation as a waste? ☐Yes ☐No
If "Yes" then include a completed **Attachment A** which describes the waste prior to treatment, and respond to the following questions. (If no, skip to 3.)

2a. Attachment A included. ☐Yes

2b. Indicate treatment method: ☐Solidification ☐Stabilization ☐Other _____

2c. ☐Yes, If solidified or stabilized, all additives are listed in Section E.

3. Does the waste pass (i.e., is solid) the EPA specified paint filter test? ☐Yes (Solid) ☐No (Free liquids present)

4. The total 40 CFR 268, Appendix III Halogenated Organic Compounds present in this waste, as shipped to ESII are at the following levels?
☐None Present ☐0 to 99 mg/Kg ☐100 to 499 mg/kg ☐500 to 999 mg/kg ☐>1000 mg/KG

* 5. Is the waste **restricted** under the Land Disposal Restrictions under federal rules of 40 CFR 268. ☐Yes ☐No (If no, skip to 6.)
(See Instructions) If yes, please answer the following:

5a. Treatment Sub-category: ☐Wastewater (<1% TSS and <1% TOC) ☐Non-wastewater ☐Other _____ Specify

5b. I certify that this material may be directly land disposed without further treatment. ☐Yes ☐No

5b1. If yes, specify: ☐Meets numerical BDAT treatment standards by analysis, which are attached..
☐Material has been treated by this technology from 40 CFR 268.42: _____
☐Material is subject to a variance or extension as specified: _____

6. GENERATOR CERTIFICATION STATEMENTS

A. FOR SOLIDS FOR DIRECT BURIAL AT ESII.

1. ☐The waste was initially generated as a solid material containing no free liquid.

-OR-

2. ☐The waste was initially generated as a liquid or waste containing free liquids. The waste has been treated to eliminate free liquids in compliance with Section 3004 (c) of the Resource Conservation and Recovery Act (RCRA) of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984. The materials used in the treatment process do not biodegrade or release liquids when compressed.The treatment process utilized (for bulk waste) did not employ the addition of absorbents to the waste (unless used in a stabilization process).

B. Certification Statement

I hereby certify that as an authorized representative of the generator named above, all information submitted in this and all the attached document are true and accurate. Pre-shipment and all other samples provided are a true representative sample of the waste and were sampled in accordance with 40 CFR Part 261.20. Any analysis of the waste was conducted in accordance with the approved test methods in 40 CFR Part 261 on a representative sample as defined in 40 CFR Part 261.20. To the best of my knowledge, all known (40 CFR Part 261/OSHA/NESHAP) and suspected hazardous components have been included in this documentation. All material, descriptions, and packaging will comply with all current regulations.

SIGNATURE _____ TITLE _____ DATE _____

TO BE SIGNED BY A GENERATOR OR PERSON ASSIGNED A POWER OF ATTORNEY. NOTE THAT AN ORIGINAL INK SIGNATURE IS REQUIRED.

PRINTED NAME _____

☐Power of Attorney is Attached

ESII USE ONLY

Comments _____

Initial Review _____ Second Review _____ Final Review _____

Date Approved _____ Date Denied _____

See WPQ summary sheet for fingerprints and waste routing.

CERTIFICATION OF SAMPLE/CHAIN OF CUSTODY WSID NO._____

DEFINITIONS:

1. WORST CASE SAMPLE: A sample which has LDR constituents at the highest level that exist in the waste profiled for shipment to Envirosafe under the above referenced WSID Number.
2. INDEPENDENT SAMPLE: This indicates a sample that was taken separately from any other sample obtained from a waste for other purposes (such as characterization). A split sample is not considered independent.

Generator Name:

Address:

Phone Number:

EPA ID Number:

Waste Stream Description:

EPA Waste Codes:

Sampler Name:

Sampler Title:

Sampler Employer:

Date:

Sampler Signature:

Hour & Date of Sample:

Source of Sample:

Amount of Sample:

Type of Container into which Sample was Placed:

Type of Sample (i.e. liquid - solid - etc.):

Other Information:

One, and only one of the following two questions must be answered yes:

1. Worst Case Sample YES NO
2. Representative Sample Per 40 CFR part 261 YES NO

The above signed certifies that he/she obtained an "independent sample" of the waste material described in the "Generator Waste Product Questionnaire" under the WSID Number referenced above,and that all the above representations are true and correct. It is further represented that the sampling equipment and sample like container used were uncontaminated prior to use and were appropriate for the type of sample obtained

All samples must be labeled with the following minimum information:
Generator Name - Waste Name - EPA Waste Code- Sample Date

Shipped VIA: _____
Chain of Possession:

RELINQUISHED BY: (SIGN)	PRINT COMPANY NAME	DATE/TIME	RECEIVED BY: (SIGN)	PRINT NAME/COMPANY
REC'D AT LAB BY:		DATE/TIME:		

CONDITIONS/COMMENTS: _____

WHITE — ESSI Contract File YELLOW — Lab 1 PINK — Lab 2 GOLDENROD — Generator

approximate costs

50.00/drum disposal non-haz x 33 = 1650.—

≃40.00/drum Trans x 33 = 1,320.—

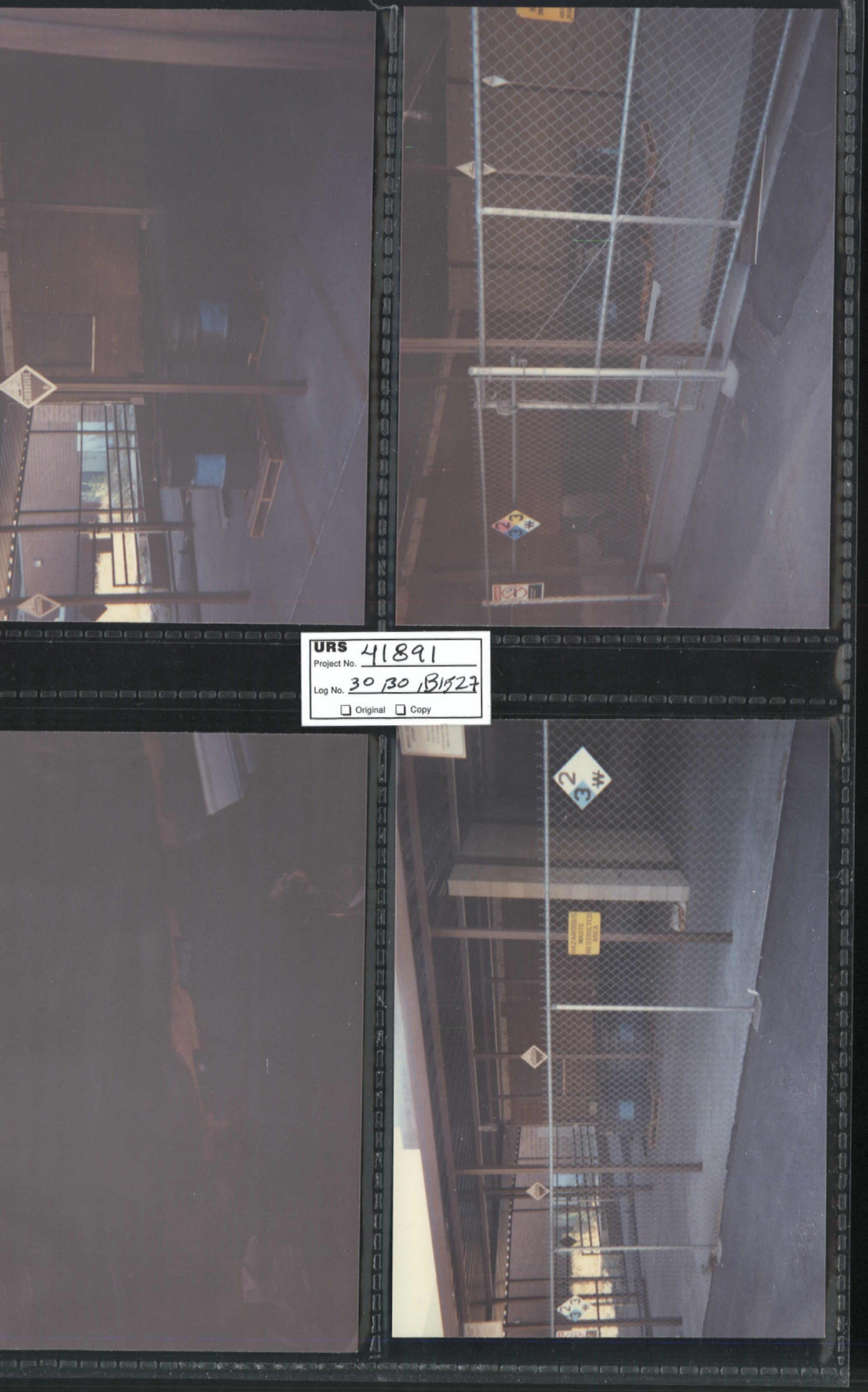
2,970.—

plus analytical (America West quote) 634.00

3604.00

2) composites
Representative of 10-15 drums each

Needs outside analysis from certified lab.



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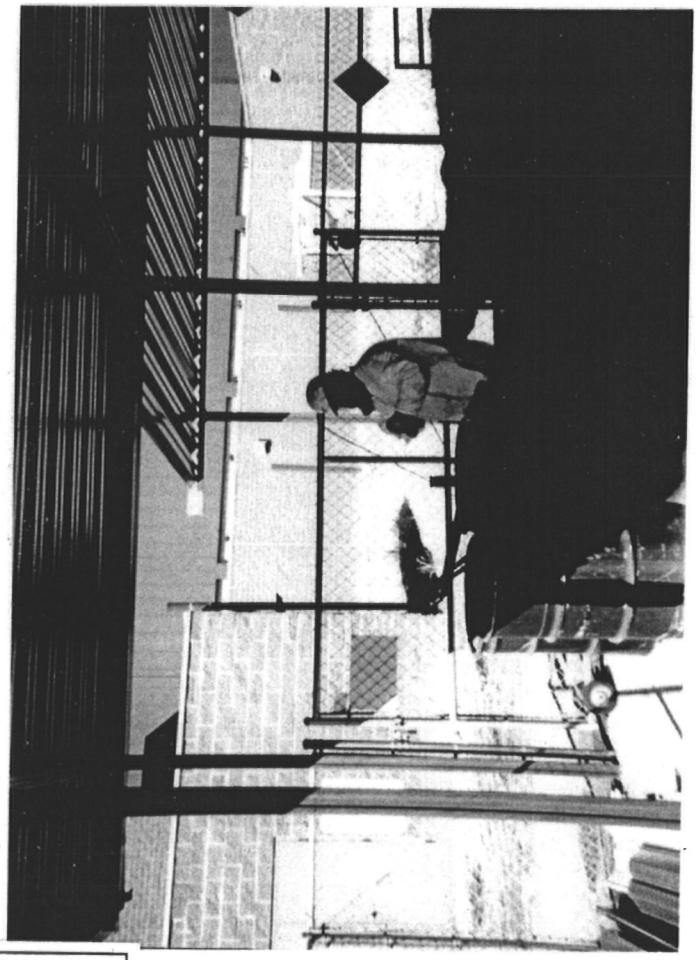

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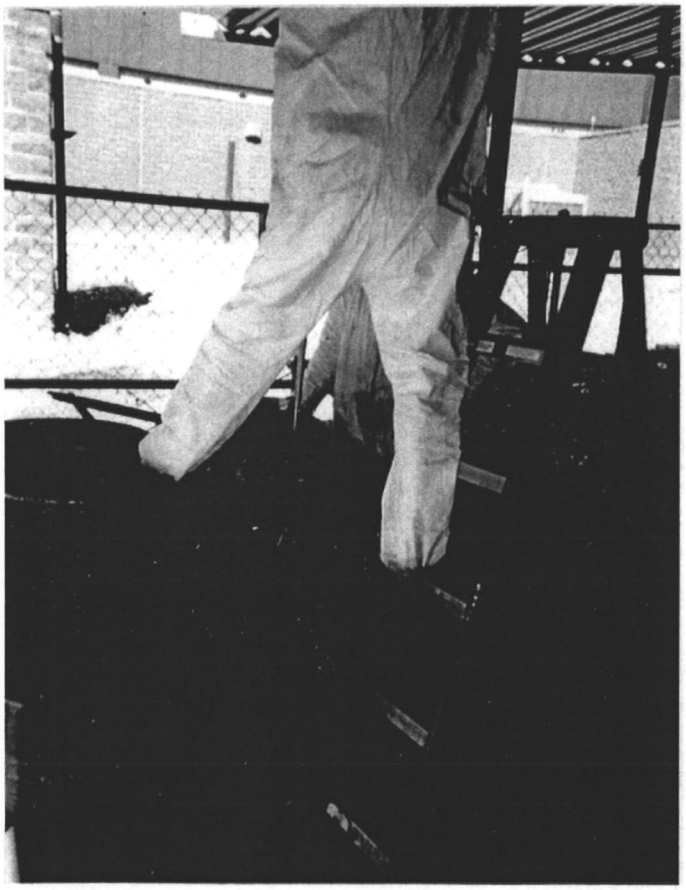

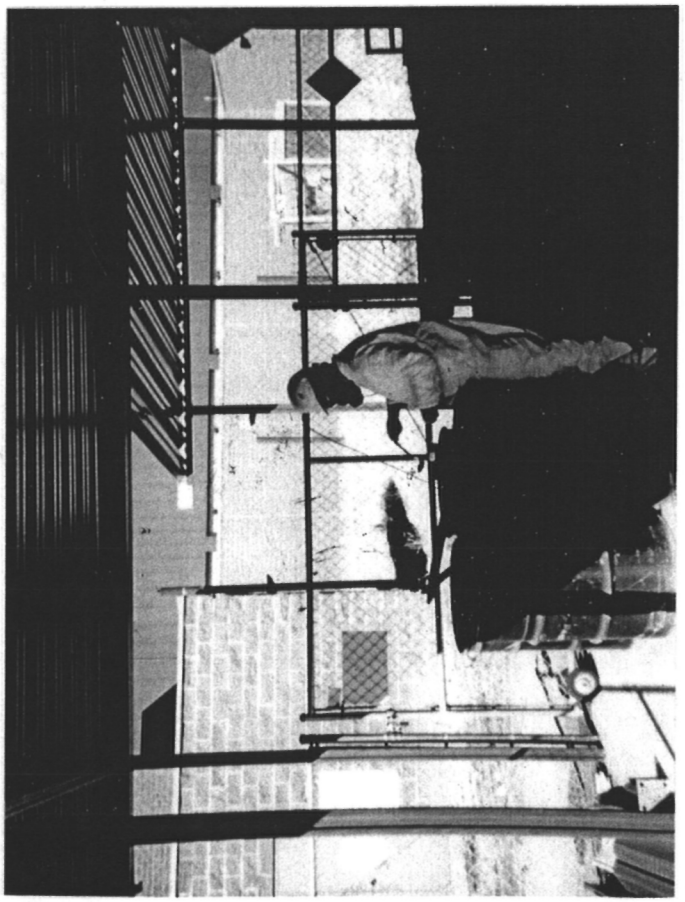

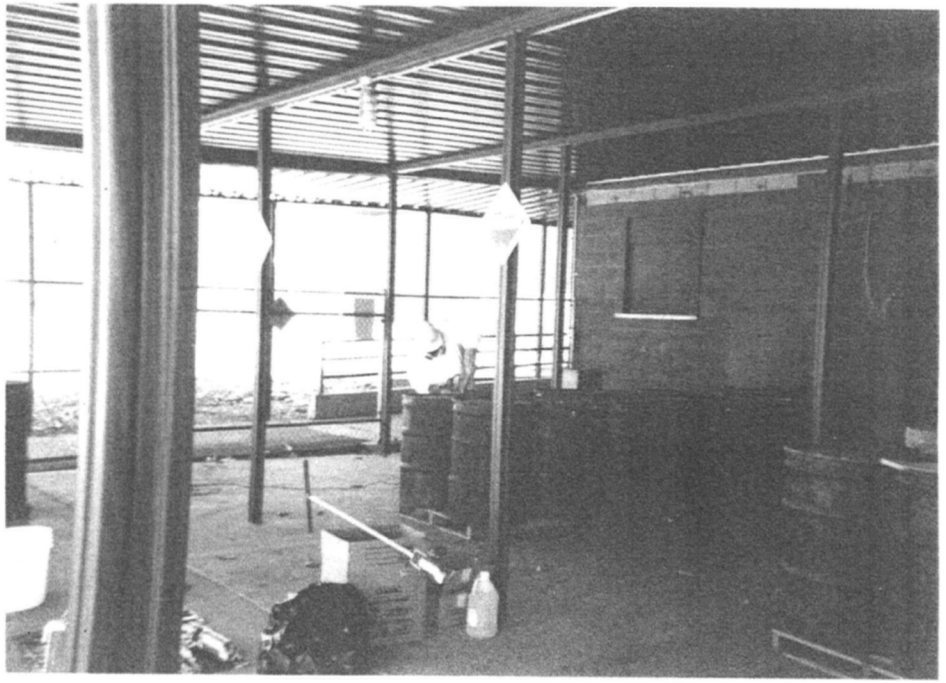

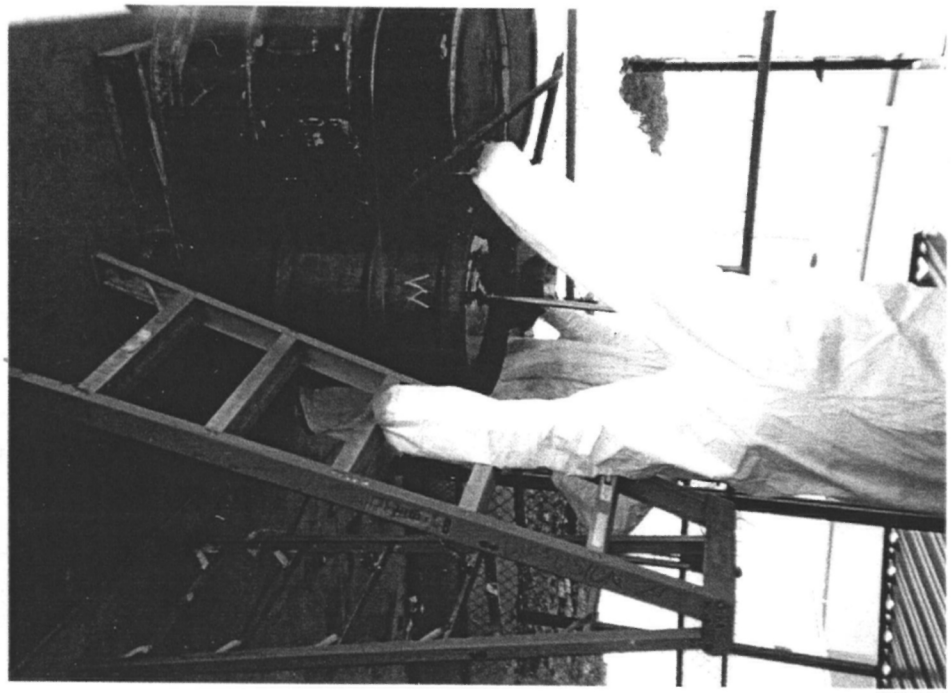

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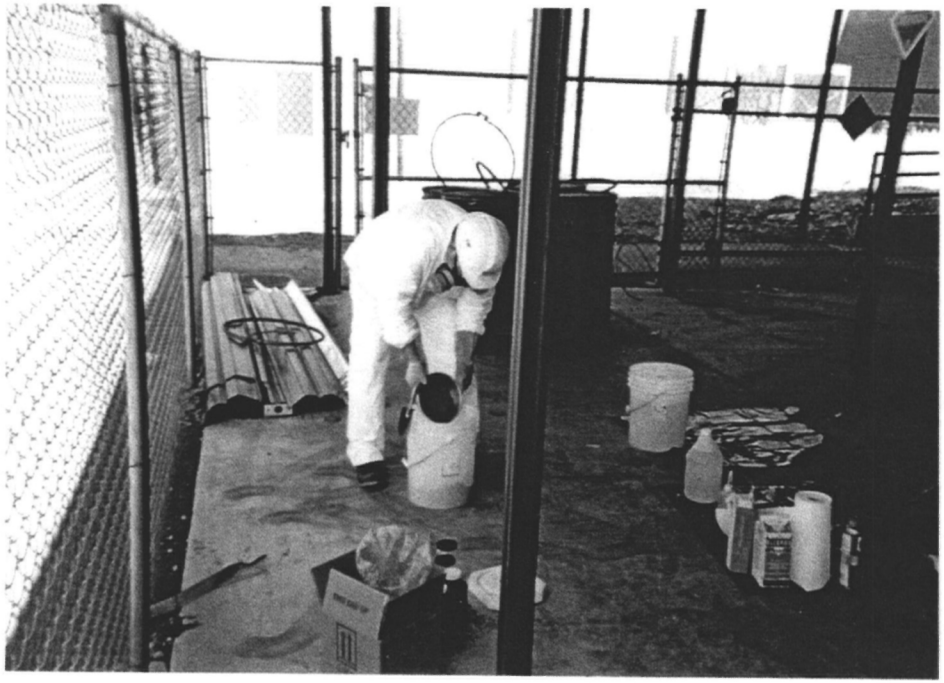

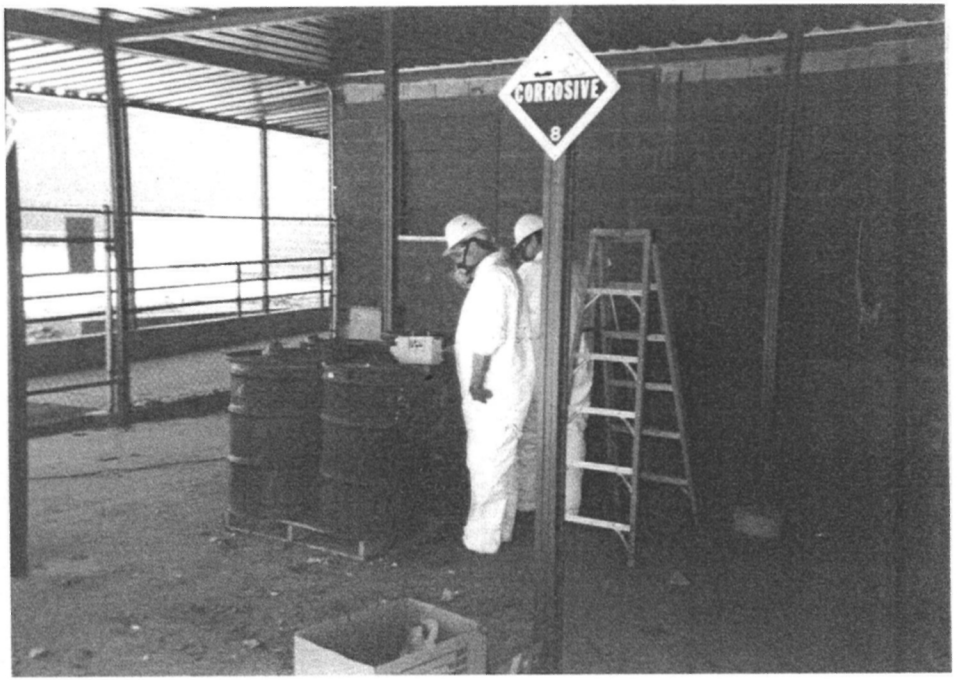
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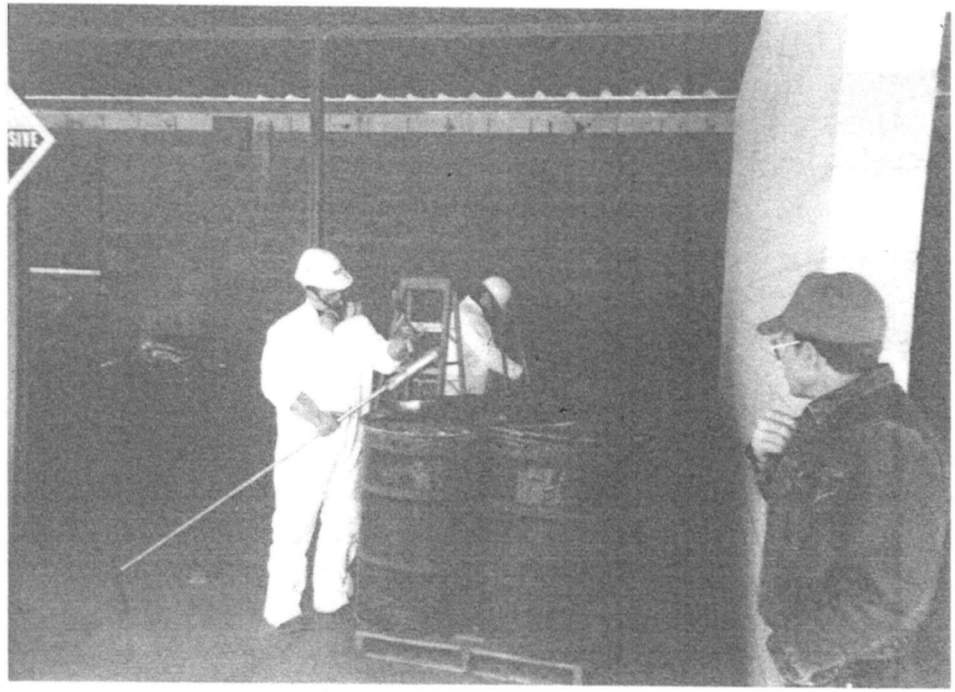

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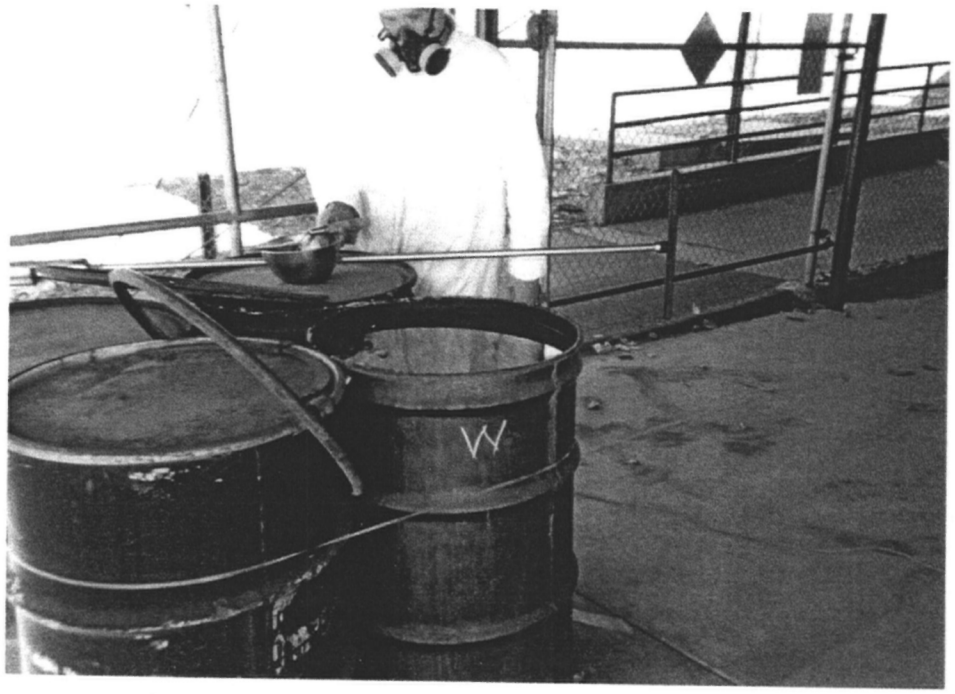

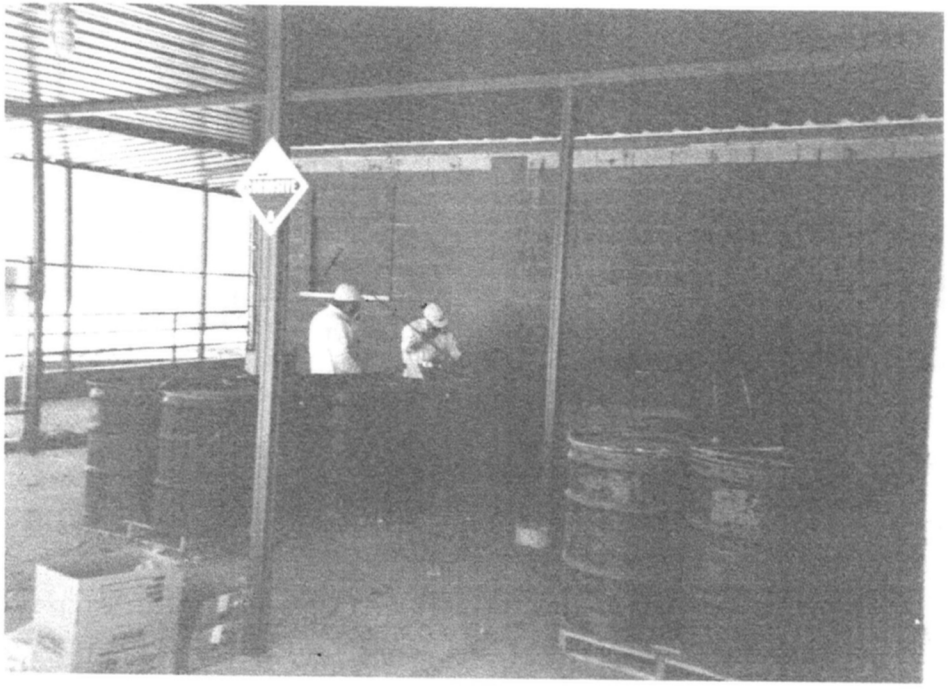

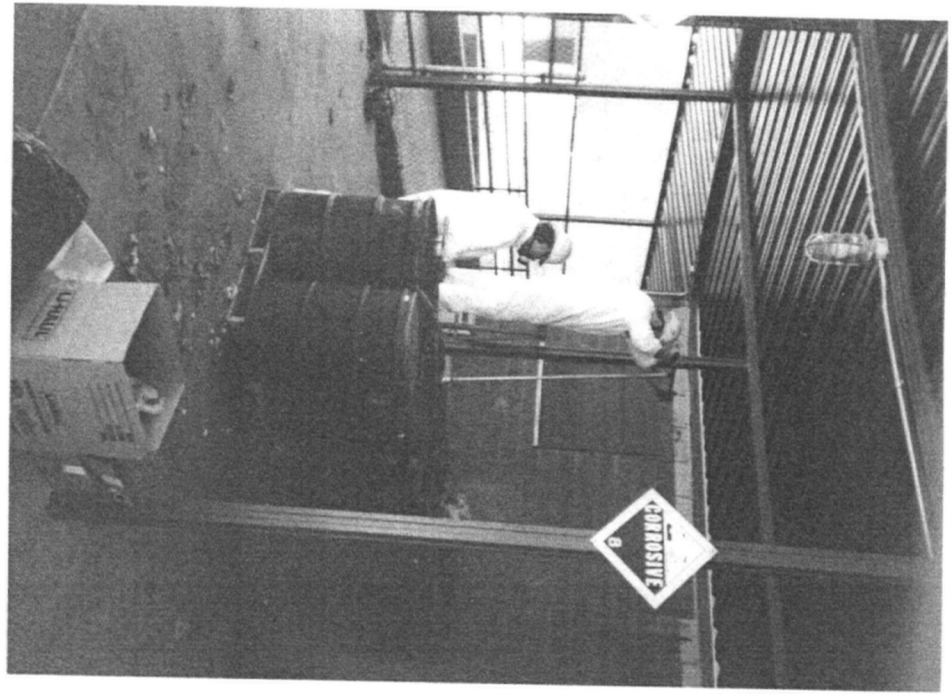
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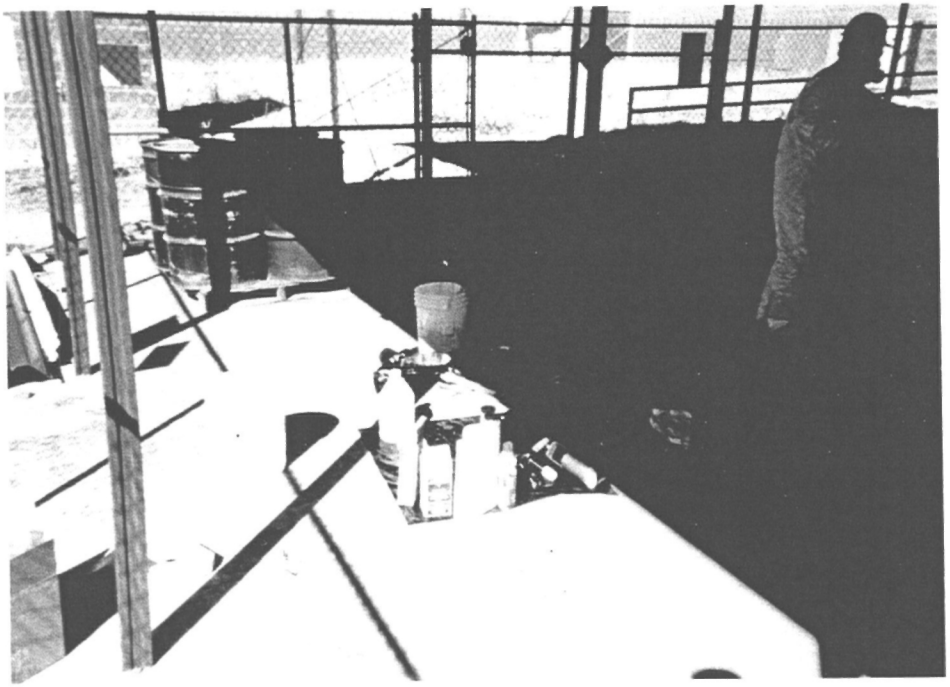

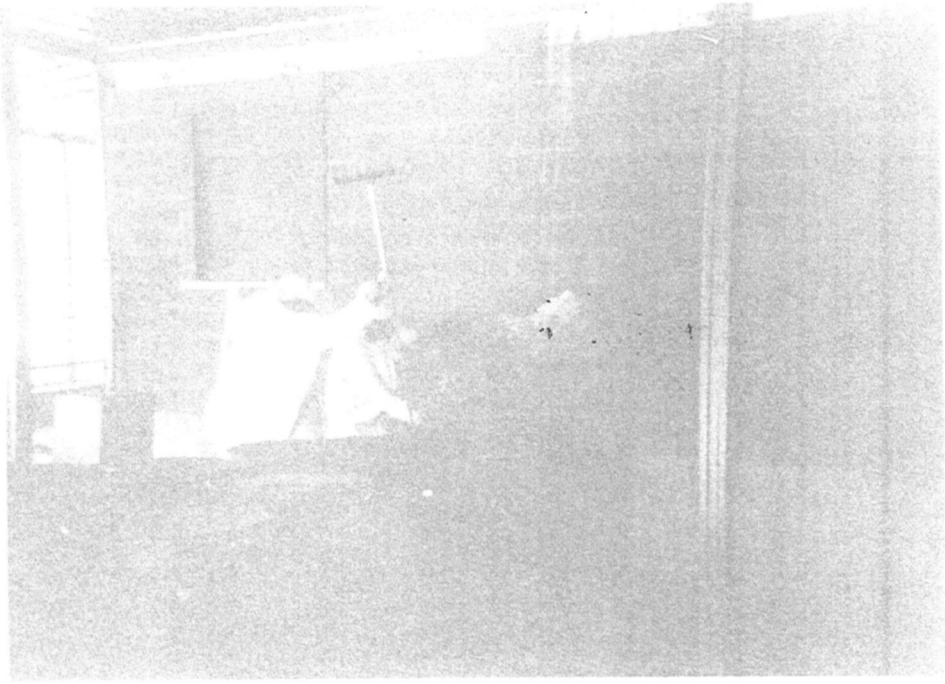

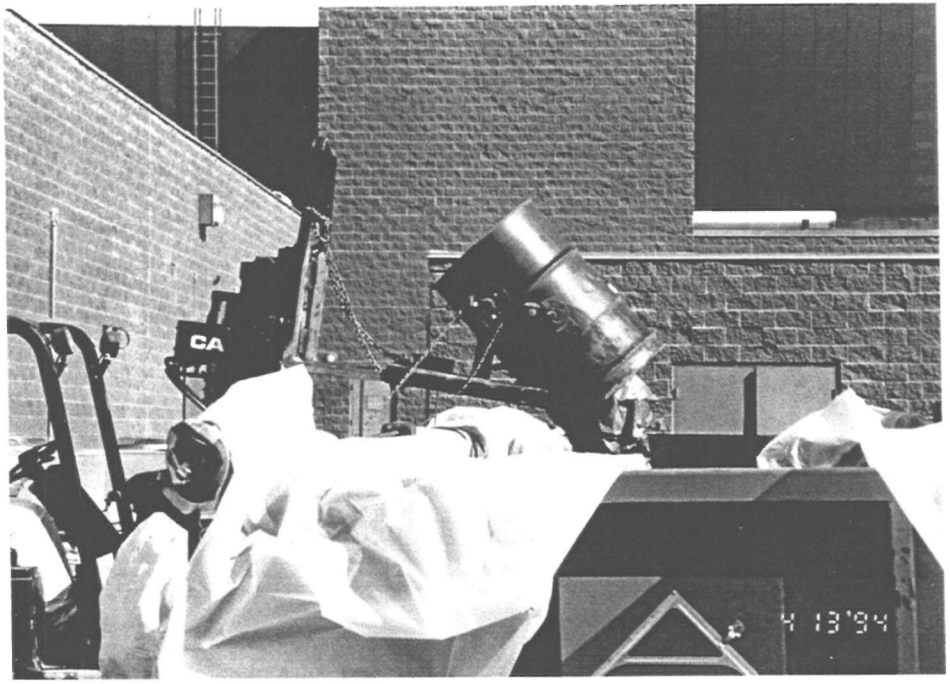
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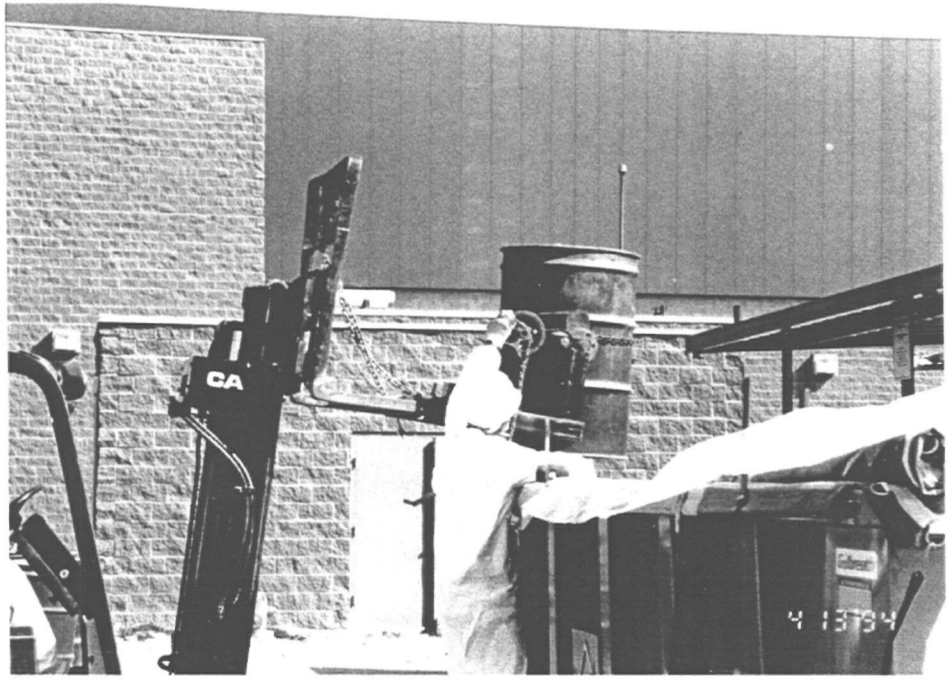
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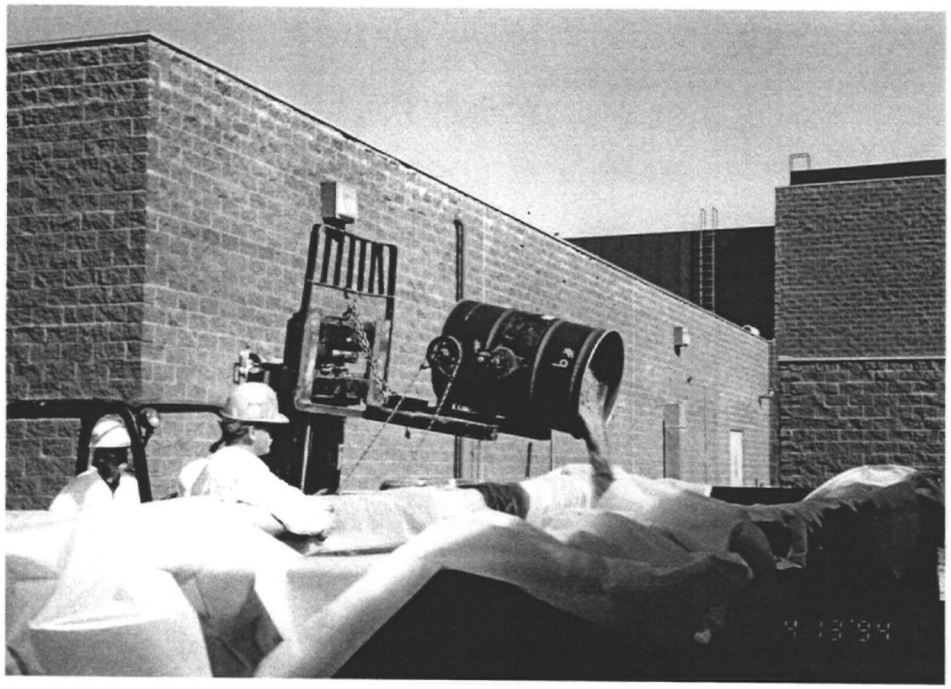
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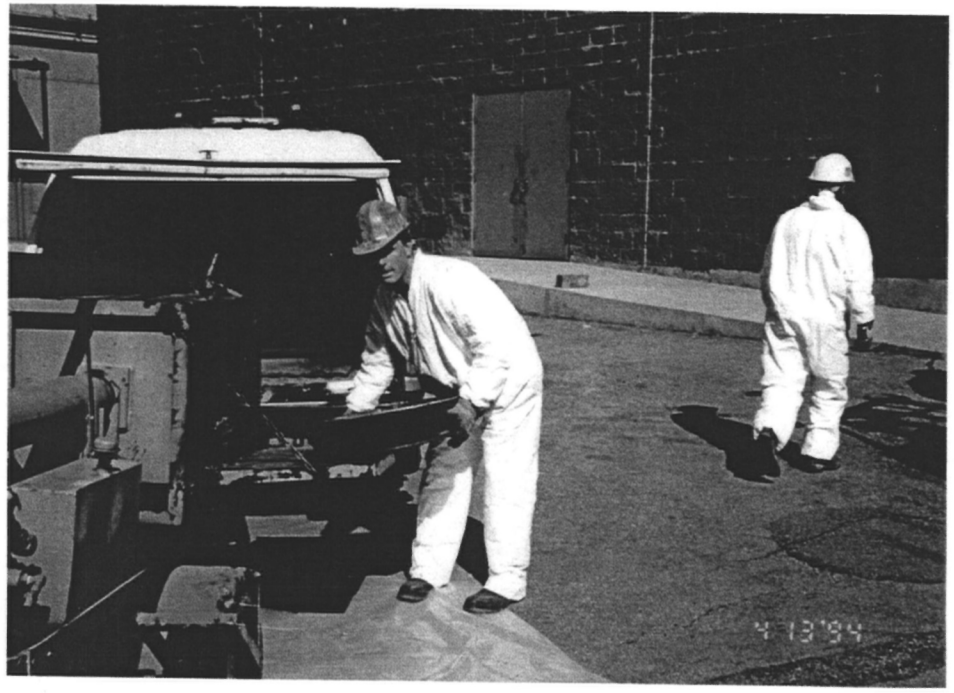
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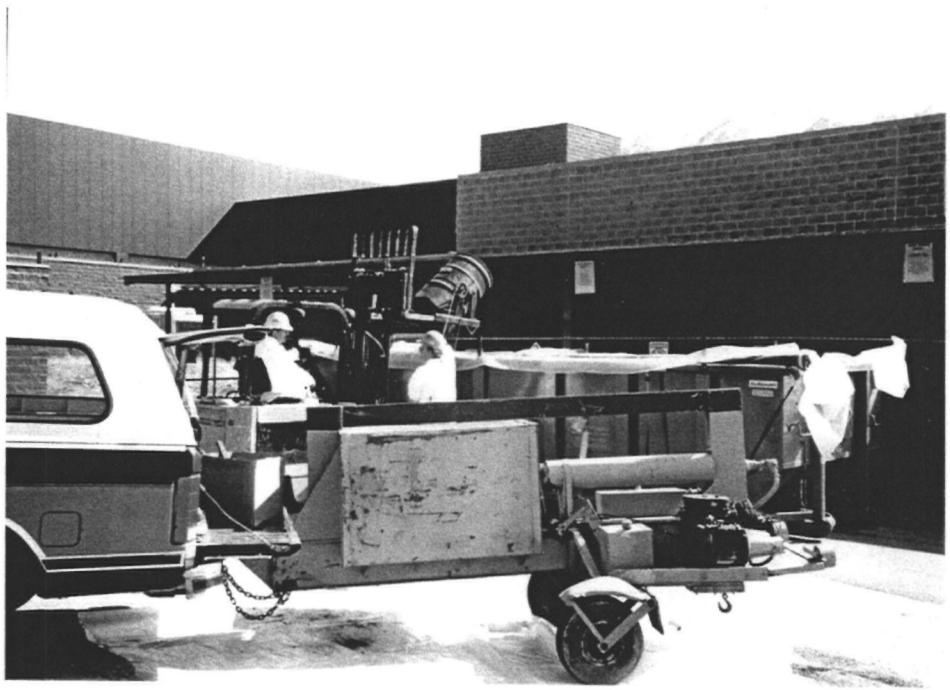


Quick Sorb
All-Purpose Absorbent
Ideal for Oil - Water - Grease


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4 13'94

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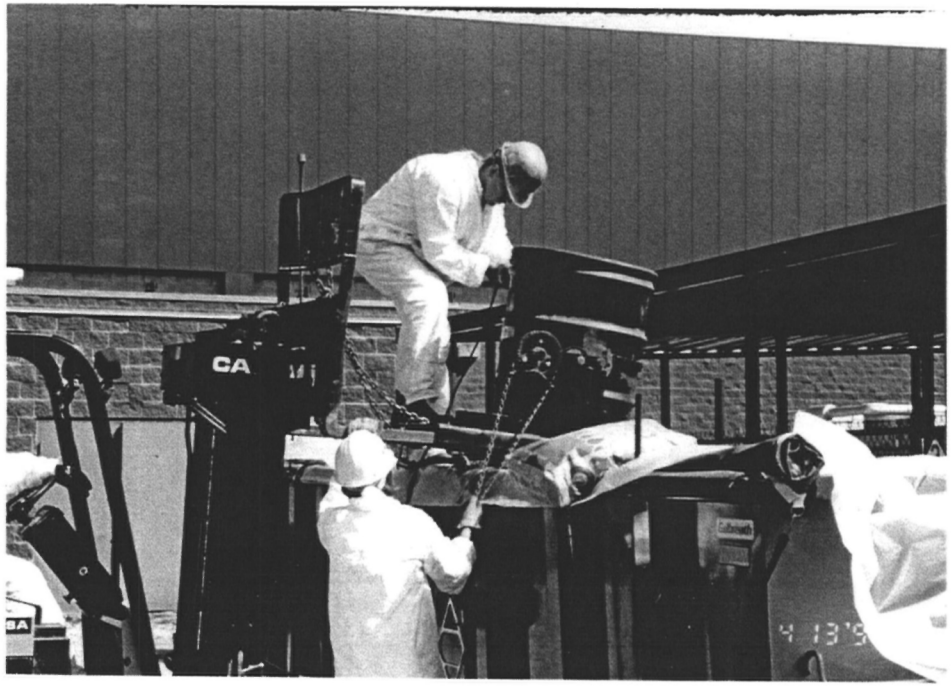
CAT


CAT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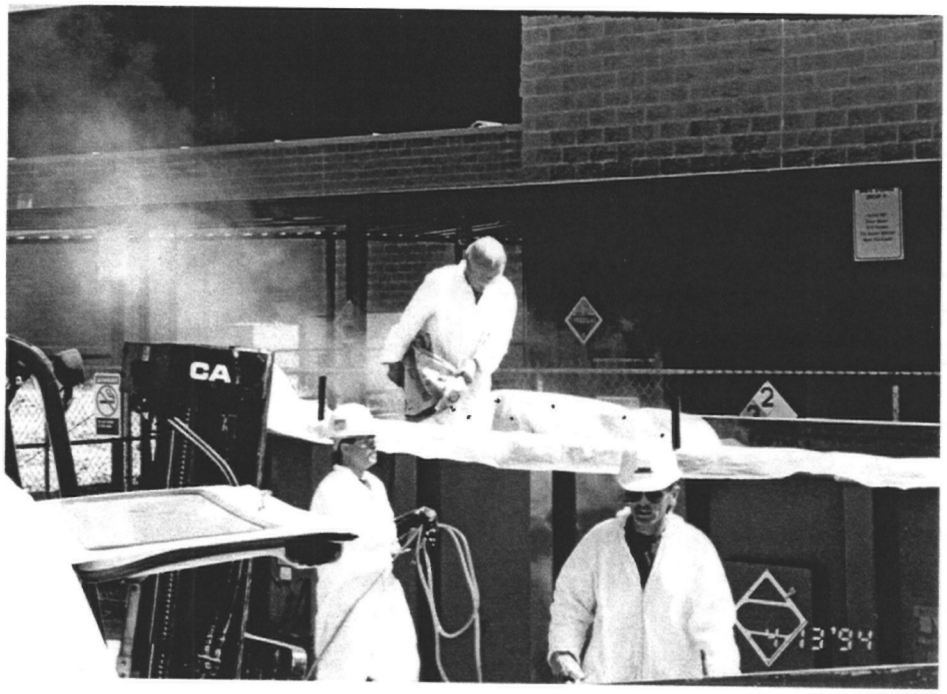
CA
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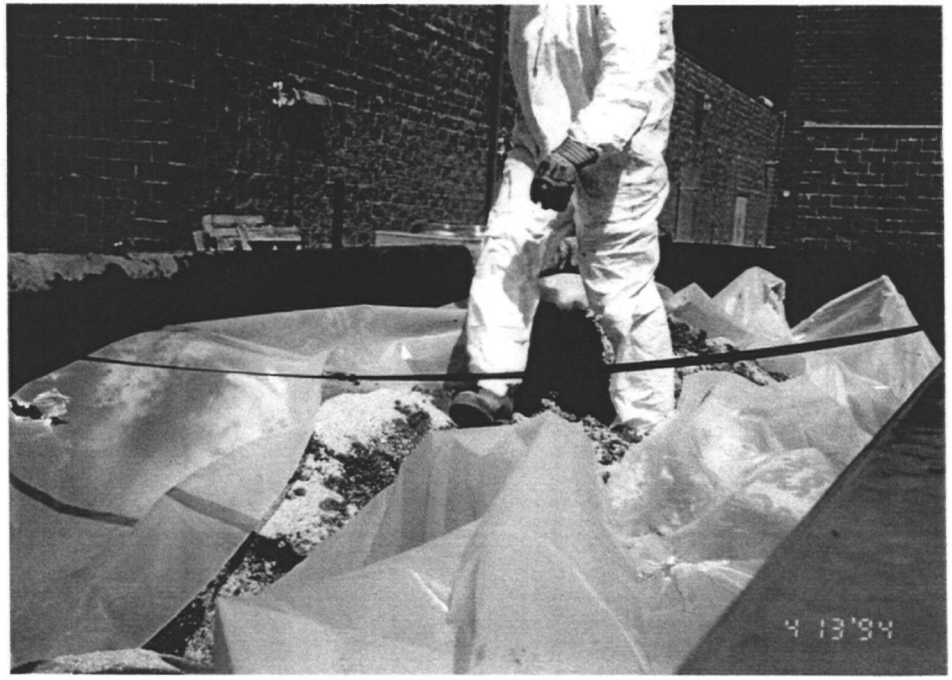
4 13'94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Mustaka

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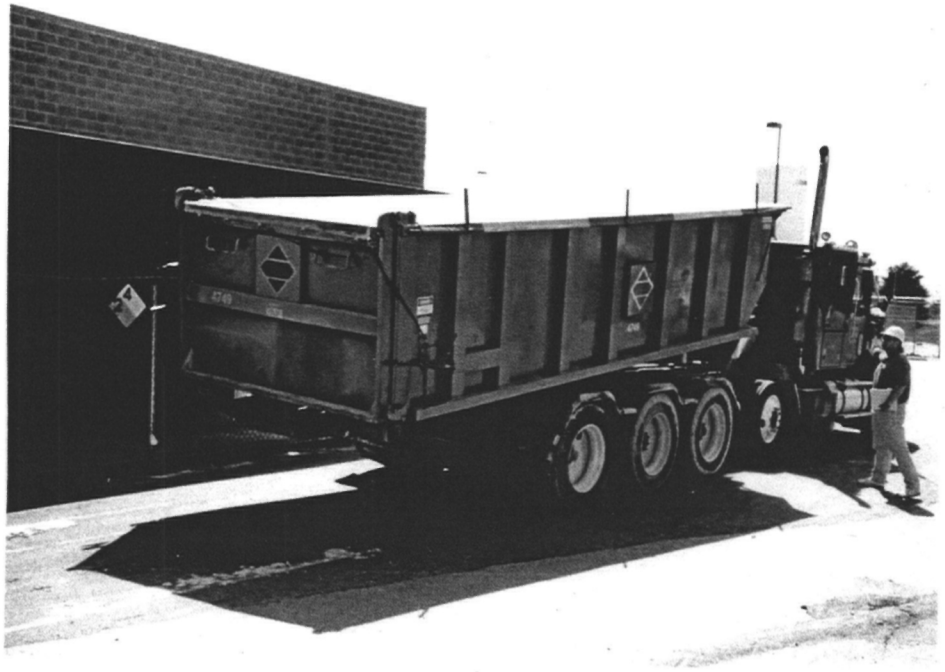

29-11

29-10

TW COMPANY

DRAFT SITE SAFETY AND HEALTH PLAN

FOR

THE SIGNETICS CORPORATION SITE

OREM, UTAH

URS CONSULTANTS, INC.

SUBCONTRACT NUMBER:

Under U.S. EPA Contract Number: 68-W9-0053

SIGNETICS CORPORATION SITE
OREM, UTAH
INVESTIGATION DERIVED WASTE (IDW) REMOVAL

DRAFT SITE SAFETY AND HEALTH PLAN

A. Site Description:

The Signetics Corporation is located at 1275 South 800 East, in Orem, Utah. The drums for waste characterization are stored on pallets within the Signetics Corporation property boundary. TW Company is acting as a subcontractor to URS Consultants Inc., to sample the product in the drums, determine appropriate disposal options and provide transportation to the selected disposal site

1. Date: Upon notification by URS Inc.
2. Location: See site description.
3. Hazards: See Section "E"
5. Area Affected:

   The contamination will be inside the building.
6. Surrounding Population:

   The Signetics facility is an abandoned facility located in an industrial setting in Orem city. The surrounding area includes the Provo River to the east and within one quarter to one half mile are some residential and commercial development to the north south and east. However, the materials are all located inside a chemical storage area inside the building, and accidental release of material would not affect the surrounding population.
7. Topography: The site is generally flat with local drainage generally to the east.
8. Weather Conditions:

   Dependent upon the date TW Company is activated to the site by URS Consultants, Inc..

9. Other information

B. Entry Objectives:

TW Company personnel will conduct initial sampling of each drum with combustible gas indicator, collect samples from each drum, consolidate the materials to one representative sample and have laboratory analysis conducted. After the lab analysis is completed, TW will assist in the determination of disposal options, and provide transportation services to the selected disposal facility. TW Company personnel will also load the drums on the truck (See Sampling and Analysis and Handling, Transportation and Disposal work plans).

C. Onsite Organization and Coordination:

1. Project Team Leader: Joe Akridge
2. Site Safety Officer: Wes Dewsnup

D. Onsite Control:

1. Entry and Exit points:

   The entry and exit points of the storage area are tentatively designated as entry and exit points. These will be modified as necessary by the Project Team Leader.

2. Safe Perimeter (outside support zone)

   To be determined on site based on physical conditions in existence at the time of TW Company involvement.

3. Zones of Control (including demarcation identifiers)
   a. Exclusion (Hot) Zone: To be determined
   b. Contamination Reduction (Warm) Zone: To be determined
   c. Support (Cold) Zone: To be determined
4. Location of Command Post: To be determined, based on time of TW Company involvement.
5. Location of Equipment Staging Area: To be determined

E. Hazard Evaluation:

1. Substances Identified as being potentially involved
   a. Trichloroethylene
   b. 1,1,1-trichloroethane
   c. Benzene
   d. Toluene
   e. Ethylbenzene
   f. Barium

g. Lead

h. 2-butanone

i. Isophorone

j. 2-methylnaphthalene

k. Bis-(2-ethylexyl)-phthalate

2. Concentrations of Identified Substances

a. Trichloroethylene - unknown

b. 1,1,-trichloroethane - unknown

c. Benzene - 2ug/l

d. Toluene - 1ug/l

e. Ethylbenzene - unknown

f. Barium - 82.9 ug/l to 391 ug/l

g. Lead - 2.5 ug/l to 24.9 ug/l

h. 2-butanone - 23ug/l

i. Isophorone - 1ug/l

j. 2-methylnaphthalene - 1ug/l

k. Bis-(2-ethylexyl)-phthalate - 6 ug/l

3. Hazards of Identified Substances:

		PEL	IDLH
a.	Trichloroethylene	50 ppm	1000 ppm
b.	1,1,1-trichloroethane	350 ppm	1000 ppm
c.	Benzene	1 ppm	3000 ppm
d.	Toluene	100 ppm	2000 ppm
e.	Ethylbenzene	100 ppm	2000 ppm
f.	Barium	0.5 mg/m$_3$	1100 mg/m$_3$
g.	Lead*	0.05 mg/m$_3$	700 mg/m$_3$
h.	2-butanone	200 ppm	3000 ppm
i.	Isophorone	4 ppm	800 ppm
j.	2-methylnaphthalene	SEE MSDS	
k.	Bis-(2-ethylexyl)-phthalate	SEE MSDS	

* **LEAD:**

OSHA Considers lead to mean metallic Pb, all inorganic Pb compounds, (Pb salts and Pb oxides), and a class of organic Pb compounds called soaps. All other organic Pb compounds are excluded from OSHA's definition of Pb (Lead).

NIOSH REL: 0.100 mg/m$_3$

OSHA PEL: 0.050 mg/m$_3$, 50ug/m$_3$, in air per 29 CFR 1910.125 - LEAD

ACGIH TLV:	0.15 mg/m$_3$	as inorganic dusts and fumes, and lead arsenate
	0.05	Lead Chromate as Pb, and is listed as an ACGIH Suspected Human Carcinogen
	0.012	Lead Chromate as Cr, and is listed as an ACGIH Suspected Human Carcinogen.
IDLH	700 mg/m$_3$	

OSHA ACTION LEVEL: 30 ug/m, in air, averaged over an 8 hour period, without regard to the use of a respirator.

When the airborne concentrations of Lead, as measured by the site supervisor, exceed the OSHA PEL, proper protective equipment as outlined will be provided to and used by all personnel working in the contaminated area. In addition, change rooms and showers as outlined in 29 CFR 1910.125 (i) shall be provided for all employees working in the contaminated area.

SYMPTOMS OF EXPOSURE/TARGET ORGANS:

Inhalation, ingestion, contact: Weakness, lassitude, insomnia, facial pallor, anorexia, low weight, malnutrition, constipation, abdominal pain, colic, anemia, gingival lead line, tremor, paralysis of the wrist and ankles, encephalopathy, nephropathy, irritation of the eyes, hypotension.

Gastrointestinal tract, Central Nervous System, Kidneys, Blood, Gingival tissue.

DECONTAMINATION:

Daily wash, irrigate eyes immediately, soap and water wash recommended.

4. Other Hazards at the Site
   a. Heavy object lifting
   b. Heat or Cold Stress
   c. Working with machinery

F. Personal Protective Equipment

1. Levels of Protection Required including suit and glove material in:

   a. Exclusion (Hot) Zone:

      All personnel working in the hot zone will wear protective clothing determined appropriate by the Project Team Leader and the Site Safety Officer

   b. Conducting Decon in Contam. Reduction (Warm) Zone: One level lower than the entry team

   c. Other site locations: As determined by the Project Team Leader

2. Specific PPE Concerns:

LEAD:

OSHA Considers lead to mean metallic Pb, all inorganic Pb compounds, (Pb salts and Pb oxides), and a class of organic Pb compounds called soaps. All other organic Pb compounds are excluded from OSHA's definition of Pb (Lead). When the airborne concentrations of Lead, as measured by the site supervisor, exceed the OSHA PEL, proper protective equipment as outlined will be provided to and used by all personnel working in the contaminated area. In addition, change rooms and showers as outlined in 29 CFR 1910.125 (i) shall be provided for all employees working in the contaminated area.

G. **Onsite Work Plans (SEE WORK PLANS)**

H. **Communication Procedures:**

Not anticipated at this project

I. **Decontamination Procedures:**

As determined by level of protective clothing selected by the Project Team Leader

J. **Medical, Emergency Medical and General Emergency Procedures**

1. For this project all medical emergencies will be handled through the local Emergency Medical Services organization by contacting 911
2. Evacuation Routes and Procedures:

   To be determined by the Project Team Leader and Site Safety Officer

   ← when supplied?
3. Other

   a. Medical Evaluations:

   If the PEL of the contaminants, specifically Arsenic and Lead exceed the PEL as determined by monitoring, all employees working the site will receive medical evaluations as required by OSHA 29 CFR 1910.120, 29 CFR 1910.1025 and 29 CFR 1910.1018 will be conducted.

K. Personal and Environmental Monitoring:

a. Types of Monitoring Equipment to be used:

During the sampling operation all drums will be monitored by a Combustible Gas Indicator.

b. Frequency of Monitoring:

At the opening of each drum

T.W. COMPANY
ENVIRONMENTAL RESPONSE - TRANSPORTATION

Corporate Office
505 North Main
North Salt Lake, Utah 84054
Telephone (801) 299-1900
Fax (801) 299-1949

Division Office
8071 North Lander
Hilmar, California 95324
Telephone (209) 664-0701
Fax (209) 664-0702

FROM: JOE AKRIDGE

FAX TRANSMITTAL MEMO

DATE: FEB 14, 1994

TO: TERRY HUBER

COMPANY:

FAX: [redacted] 303-296-6116 TELEPHONE:

REFERENCE:

SPECIAL INSTRUCTIONS:

DRAFT SITE SAFETY/HEALTH PLAN
SIGNETICS, OREM, UTAH

Pages Being Sent Including This Page 11 .

URS CONSULTANTS, INC.
Denver Division

Memorandum

Date: January 21, 1994

To: Andy Keim, Project Engineer

From: Terry Huber, Subcontract Administrator

Subject: Technical Evaluation

Reference:
a) TW Company Technical Proposal
b) e^2M Technical Proposal
c) PMT Services Technical Proposal

Please provide a Technical Evaluation of the referenced subcontractor's proposals by no later than January 25, 1994. If further information is required to complete the evaluation contact me at extension 261 immediately.

Thank you.

URS CONSULTANTS, INC.
URS - WEST
ARCS VI, VII and VIII

MEMORANDUM

TO: Terry Huber

FROM: Andy Keim A.K.

DATE: January 21, 1994

SUBJECT: Technical Evaluation of Bids received January 7, 1994 for the Signetics IDW Removal Project

Proposals for the removal of IDW from the Signetics Corp. Site in Orem Utah were received from The Roybal Corporation of Denver, Colorado and Metroplex Industries, Inc. (MII) of Houston Texas. I did not review the bids. Metroplex provided URS with a Statement of Qualifications and a resume package, but did not indicate which staff members would be available to work on the project or what the Company's approach to the project would be (items requested in the solicitation fact sheet). URS requested additional information from MII in order to evaluate its proposal, but the company did not respond. Consequently, MII did not provide sufficient information for me to evaluate its ability to do the proposed work.

The Roybal Corp. addressed the basic elements of the SOW and appears to understand the nature of the work. It has experience with similar types of projects and qualification of the staff are adequate, but the project manager has limited experience with the management of IDW. In addition, I have some concerns as to whether or not a truly representative sample of the IDW can be obtained with the proposed use of disposable scoops. A coring method would be preferable unless it is known for certain that the IDW in each drum is homogeneous.

cc: Site File/URS/Denver
ARCS File/URS/Denver

2/2/94

To: Terry Huber

From: Andy Keim

Re: Bids for development of planning documents from TW Company & PMT Services (RFP # DE-94-Q-1611a)

Per your instructions, I checked with TW Company and PMT Services ~~Re~~ to ensure that their bids included providing URS with the 3 plans (Sampling and Analysis; Health and Safety; Materials Handling, Transport, and Disposal Plans) requested in the SOW.

Joe Akridge of TW Co. indicated that the $750 bid for plan development included all 3 requested plans. He said that 3 employees of TW Co. would prepare the plans and that they would be site-specific (i.e., tailored to the project).

Suzanne Kayser of PMT Services also said that their bid included the preparation of all 3 requested plans, but that for a job of this size, they would contain a lot of boiler plate language (i.e., generic plans with minor modifications). She said that her company specializes in this type of work and that is why the price is low.

TECHNICAL EVALUATION REPORT

SUBJECT: RFP No. DE-94-Q-1611a; IDW Removal from the Signetics Corp. Site, Orem, Utah.

1. ACCEPTABLE PROPOSALS

Proposals received on the subject RFP have been evaluated by Andy Keim. The following firms submitted proposals which are technically acceptable and are recommended for consideration. The firms have been arranged in descending order of technical score as discussed in Section 4.

a. engineering-environmental Management, Inc. (e^2M)
b. TW Company
c. Roybal Corp.
d. PMT Services

2. UNACCEPTABLE PROPOSALS

The following firm submitted a proposal which was unacceptable because it did not meet the minimum requirements of the solicitation.

- Metroplex Industries, Inc. did not provide adequate information to evaluate its proposal.

3. TECHNICAL EVALUATION MATRIX

The following table presents the numerical weights used to evaluate each proposal and indicates score received by each firm:

		e^2M		TW		PMT		Roybal	
Criteria	Wt.	Score	Ext	Score	Ext	Score	Ext	Score	Ext
Technical Capability	40	8	320	7	280	7	280	8	320
Management Capability	20	8	160	8	160	8	160	7	140
Technical Approach	40	9	360	8	320	6	240	7	280
Total	100	--	840	--	760	--	680	--	740

10 = excellent
1 = unacceptable

4. DISCUSSION OF ACCEPTABLE PROPOSALS:

- e^2M: The firm had the best technical approach of all the firms evaluated and adequately addressed all of the elements of the SOW. The proposal presented a method for screening the drums with a photoionization detector (PID) prior to collecting the composite samples. Samples would be collected with an auger or coring device which would provide a more representative sample of the drum contents than would be achieved using scoops or drum thieves, as proposed by other firms. Approximately one-half of the drums would be sampled and three composites would be sent to a laboratory for analysis. An additional three split samples would be sent to the TSD facility for profiling. The approach proposed by e^2M is conservative and would provide the least potential for liability that could result from inadequately characterizing the IDW and disposing of the material in an improper manner. However, the collection and analysis of three composite samples is more expensive than the use of a single composite sample to represent the IDW, as proposed by TW and PMT. The firm has prior experience in waste sampling, analysis, transport and disposal. Similar types of projects completed by e^2M range from a small site mitigation project to large facilities at a U.S. Air Force Base. The proposed project manager has experience in regulatory compliance, preparation of planning documents, and hazardous waste management. The proposed schedule would allow for completion of the project in the allotted time.

- TW: The firm adequately addressed the basic elements of the SOW in a brief proposal and appears to understand the nature of the project. TW has qualified drivers and experience in preparation of planning documents and transport of waste, but experience has primarily been in responding to accidental releases. The proposed project manager has experience managing projects ranging from less than $10,000 to over $1 million. TW proposes a cost-effective approach for characterizing the waste by having the TSD facility's laboratory perform the chemical analyses. This would eliminate the need for having to send split samples to the TSD for profiling of the IDW while another laboratory determined if the material is a RCRA hazardous waste. The collection of core samples from the drums is proposed and is preferable to the sampling methods that would be used by Roybal or PMT. However, only one composite sample would be collected and no method of screening (other than visual observations) is indicated. As with Roybal's and PMT's proposal, the collection of a representative composite sample would be satisfactory if the material in all of the drums is homogeneous. Appropriate analyses for characterizing the drummed materials are specified in TW's proposal. The schedule proposed by TW is adequate for completing the project in the necessary amount of time.

- PMT: The firm has prior experience in dealing with hazardous waste and owns registered vehicles for hauling. The use of drum thieves is proposed for sampling, yet the SOW states that the IDW is believed to consist entirely of soil cuttings. Sampling of solids could be difficult, if not impossible, with a conventional drum thief. PMT does not appear to understand the nature of the IDW material, and it is uncertain if PMT has put much thought into how it intends to sample the drums. The collection of one composite sample is proposed and would be randomly collected from 10 of the drums. This approach would be satisfactory if the material in all of the drums is homogeneous, but would provide less certainty that a representative sample has been collected than the method proposed by e^2M or Roybal. Personnel proposed for the project have experience in waste management, but the proposal did not provide specific examples of projects

similar to the one presented in the SOW. It is my understanding that sampling of the drums would be performed by another consultant under subcontract to PMT, but the qualifications of this individual were not provided in the proposal. A specific project schedule was not presented in the proposal. PMT has subcontracts in place with disposal facilities and a laboratory. Split samples are not proposed and it must be assumed that the disposal facility would accept the laboratory analyses for profiling of the IDW material.

- Roybal: The firm addressed the basic elements of the SOW and appears to adequately understand the nature of the work. The Roybal Corp. has prior experience with similar types of projects for the National Park Service and private clients. The proposed project manager has received hazardous materials management training, but has limited demonstrated experience in managing IDW. Roybal's employees appear to be adequately trained and capable of performing the tasks specified in the SOW. The use of disposable plastic scoops is proposed for the collection of three composite samples, but is inferior to the coring method proposed by e^2M and TW. The material in each drum would need to be completely homogeneous in order to collect a representative sample with this method. Appropriate analytes were specified for characterizing the waste in Roybal's proposal. A specific project schedule was not presented in the proposal.

5. DISCUSSION OF UNACCEPTABLE PROPOSALS:

- Metroplex Industries: The firm did not adequately respond to the RFP and provided nothing more than a statement of qualifications. No information specific to the IDW removal project was presented. Additional information was requested from Metroplex, but it did not respond.

URS CONSULTANTS

PURCHASE REQUEST

Purchase Request: 4754

2. Date: 3/30/94

3. URS Office: Denver

10. Suggested Suppliers: TW Company

4. Job No.: 68-41891.30

5a. Bill to Client? ☒ Yes ☐ No

If yes: Prime Contract No. 68-W9-0053

5b. DO/DX Rating: N/A

6. MIS Request Required? ☐ Yes ☒ No

7. AFE Required? ☐ Yes ☒ No

11. Delivery Instructions:
ANDY KEIM
URS CONSULTANTS / DENVER, CO.

8. Date Required: 4/1/94

9. P.O./Subcontract No. ~~DE-W9-0053~~

12. ITEM NO.	13. G.L. No.	14. DESCRIPTION OF GOODS OR SERVICES	15. QUANTITY	16. UNIT	17. ESTIMATED UNIT PRICE	18. ESTIMATED TOTAL COST
1		Request modification to original subcontract (See attached Amendment to SOW)	1	LS	~~$1700~~ $1,673.12	~~$1700~~ $1,673.12

Received 3/31/94

4/15/94

URS Project No. 41891
Log No. 30,50,B1528
☐ Original ☐ Copy

Job No. for Procurement: 68-41891.30

Period of Performance: Through 4/15/94

Cost Proposal Due to Client: ____

Client Negotiations Date: ____

TOTAL: 19. ~~$1,673.12~~ $1,700.00

20. Purpose: IDW Removal @ Signetics Corp. site (Special Studies W.A.)

Received, inspected, and accepted as shown:

Signature: ____ Date: ____

21. Date: 3/30/94

Typed or Printed Name and Title of Initiator: ANDREW M. KEIM PROJECT MANAGER

Signature: Andrew M. Keim

Telephone No: (303) 296-9700

22. Date: 30 Mar 94

Typed or Printed Name and Title of Approving Official: T F STAIBLE

Signature: T F Staible

23. Date: ____

Typed or Printed Name and Title of Additional Approving Authority, if required

Signature: ____

URS Consultants, Inc.
ARCS, EPA Regions VI, VII, VIII
Contract No. 68-W9-0053

March 30, 1994

AMENDMENT TO THE STATEMENT OF WORK FOR INVESTIGATION DERIVED WASTE (IDW) REMOVAL AT THE SIGNETICS CORPORATION SITE, OREM, UTAH

The subcontractor shall solidify/stabilize liquid waste prior to shipment and disposal at the designated EPA-approved RCRA land cell facility. All drums of IDW shall be emptied into a Department of Transportation (DOT) approved roll-off container at the Signetics Corporation site. The subcontractor shall add absorbent material to the roll-off container in order to solidify free-flowing liquids. Liquids shall be solidified such that the contents of the roll-off container pass the EPA paint filter test, per RCRA Land Disposal Restrictions (LDRs; 40 CFR 268). All emptied drums shall be crushed and placed in the roll-off container for disposal at the RCRA land cell facility. The subcontractor is responsible for providing all necessary labor, equipment (i.e., drum crusher, roll-off container, fork lift, etc.), and materials (absorbent).

☐ SOLE ☒ SINGLE SOURCE JUSTIFICATION

1 PR (s) Number(s) 4754	2 RFP/RFQ Number ___

3 Supply(ies) or service(s) to be purchased: Additional task to solidify / stabilize liquid wastes prior to shipment & disposal at EPA-approved RCRA land cell facility.

4 Basis for sole or single source award justification:

☐ Only one responsible source and no other supplies or services will satisfy the requirement. Conclusion based upon: ___

☒ Unusual or compelling urgency. Nature of urgency: Client required task to be completed by 2nd week in April.

☒ Potential consequences if competitive quotes are solicited: Time does not allow to obtain qualified competitive bids. Task to be completed w/i 2 weeks.

☐ Sole source dictated by client. Reference document dictating sole source: ___

☒ Other: task required for TW Co to complete original SOW. When original SOW issued URS unaware of drum contents - assumed soil only. Because liquid is in the drum disposal process changes, which is in TW's original SOW. They are responsible for cleanup.

☐ Economically justified based on:

Elaboration of reason(s) for economical justification(s): ___

☐ Engineering directed. Explain: ___

☐ Only source that can meet need date. Explain: ___

☒ Insufficient lead time to allow for competition was not caused by lack of planning on URS' part but was because: need of Client to complete original task (given to TW) by 2nd week of April.

5 Efforts made to locate additional sources:

None

I certify that I have made a reasonable effort to identify additional sources for the supply(ies) or service(s) specified in number 1 above.

Andrew McKeen [signature]
PR Initiator (Requestor)

Date ___

I hereby approve this justification for a sole source purchase as a legitimate exception to URS' policy of soliciting price competition to the maximum practical extent.

Approved/Disapproved:

RECEIVED
MAR 31 1994
PURCHASING

___
Branch or Program Manager

Date ___

Approved/Disapproved:

[signature]
Buyer

3/31/94
Date

UPM/VOLUME 3/UPM.102

10/22/92

AX (303) 296-6117

28, 1994

Huber
ontract Administrator
Incorporated
18th Street, Suite 700
r, Colorado 80202-9700

Change Order for Contract Number DE-W9-0053, WA# 22-8JZZ

ber:

telephone conversation with Andy this morning, the following is an tion for the additional cost to disposal of the (33) thirty three located at Signetics Corporation, Orem, Utah.

the sampling for disposal, we noticed an estimated (15) fifteen containing water at more than 5 percent of volume. Because of the content, drums containing free flowing liquids can not be disposed RCRA land cell (Land Disposal Restrictions). Therefore, drums con- liquids must be solidified/stabilized prior to shipment and dispos- ne designated EPA approved RCRA land cell facility.

mpany will bulk all drums of soil/clay/rocks/plastic/water into a ment of Transportation(DOT) approved 25 cubic yard roll-off con- Once the soil and liquid is in the roll-off container, all free flow- ds will be solidified to meet the EPA paint filter test. All drums st contained the soil, will be crushed and placed into the roll-off er for disposal.

505 North Main
North Salt Lake City, UT 84054
(801) 299 1900 Fax 299 1949

se of the difficulties obtaining an EPA identification number from
VIII, and the water content of the drums, TW Company request that
aste removal date be extended until April 12, 1994. We our in the
ss of updating the Materials Handling, Transport, and Disposal Plan
lected the new procedures, and will forward these to you by April 1,

ed with this letter is a breakdown of the additional cost for stabi-
the drums. If you have any questions or comments, please call me at
299-1900 fax (801) 299-1949

Sincerely,

John K. Hart
Client Services Manager
TW Company

ure
Akridge

Breakdown of Additional Cost

e labor to remove soil and liquids from drums and place it into a 25 yard DOT approved roll-off container. Solidify and stabilize liquids. e container for transportation to disposal facility.

or 3 men @ $43.00/day 8 hour/day (includes driving, etc.) 1 man handle the forklift 1 man handle the lifter/tilter 1 man handle the drums		$1042.00
pment		
rklift:	$120.00 per day	
um lifter/tilter:	$50.00 per day	
m Crusher:	$300.00 per day	
		$470.00
plies		
ent	$8.00 per bag High estimate 20 bags	
		$160.00
	TOTAL:	$1672.00